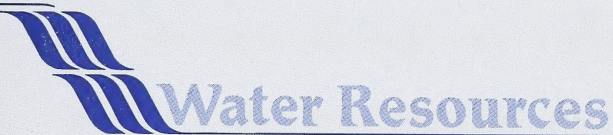


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**NATURAL FLOWS
FOR
WILLOW CREEK BASIN**

Alberta
ENVIRONMENT

DDN 7294940



SYNOPSIS

As part of a water management planning program for the Willow Creek basin, natural flows are developed for seven hydrometric station locations and four project sites in the basin. The flows are monthly mean values for the period 1912 to 1983.

The natural flows at hydrometric station locations are derived by removing the influence of man-made projects from the recorded data. The influence of a man-made project is determined from water use return information in Water Rights files maintained by Alberta Environment. Since the period of record for the hydrometric station locations does not cover the entire 1912 to 1983 study period, naturalized streamflow are extended to the study period by means of regression equations developed in the study.

NATURAL FLOWS FOR WILLOW CREEK BASIN

The monthly natural flows are reported in printed form within this report and are also contained, by Hydrology Branch, in a computer data base for future use.

Prepared by : S. J. Figliuzzi, P. Eng.

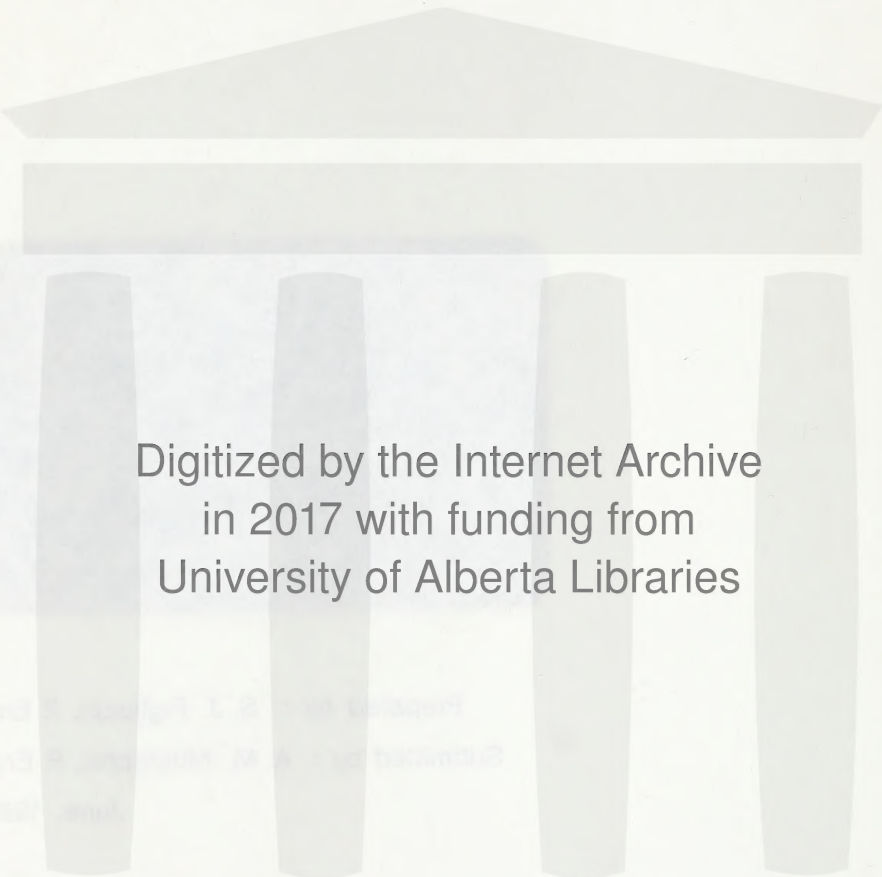
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June, 1985



Water Resources Management Services
Technical Services Division
Hydrology Branch

JUNE, 1985



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Natural flows at Project sites are developed using an area relation between the project site and nearby hydrometric sites for which extended natural flows were developed.

The monthly natural flows are reported in printed form within this report and are also contained, by Hydrology Branch, in a computer data base for future use.

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WILLOW CREEK NATURAL FLOWS

1. INTRODUCTION

Licences for the consumptive use of water, from the Willow Creek basin, were first issued in the late 1800's. These early licences were issued for gravity irrigation projects which apparently were constructed to "prove up" the land and so acquire it under the homestead regulations of that period. Between 1900 and 1963 the demand for water in the basin remained relatively constant. Since 1963, however, there have been numerous projects constructed and as a result the basin demand for water increased seven fold to its present (end of 1984) level of approximately 23,000 acre-feet. While irrigation remains the prime user demands for municipal, industrial, recreational, and environmental uses are becoming increasingly important.

Regional planning studies, conducted in the mid-seventies, recognized that, with the rapid rate of increase in demands, difficulties would be experienced in meeting the agricultural water demands from Willow Creek, towards the mid-eighties. These reports went onto recommend that detailed studies be conducted so as to develop a water resource management strategy for the Willow Creek basin.

Water management concerns for the basin became even more apparent in 1977 and 1984 when significantly below average summer runoff combined with the presently high level of demand to create severe water shortages throughout the lower reaches of the basin. In view of these shortages, Planning Division of Alberta Environment initiated a study, late in 1984, to assess various water management strategies and to develop a water management plan for the Willow Creek basin. The method chosen for assessing the success of selected water management alternatives was to determine the water supply for a historical period and to then test the success of alternatives by superimposing them on the historical period.

This report presents the method and results of a study to develop monthly mean natural flows, for 1912 to 1983, at seven hydrometric station locations and four points of interest within the Willow Creek basin. As the recorded streamflow data base, for Willow Creek, reflects historical patterns of water use and since the present and future water uses are different than actual historical patterns; an important part of the process was the removal of the effects of historical uses from the data set so as to develop a set of natural streamflows. Also, since the recorded streamflow data base is relatively incomplete; an equally important part of the process was the development of equations which could be used to transfer information from nearby hydrometric stations to stations in the basin and thus extend the recorded period to the study period. Lastly, it was necessary to transfer the extended, naturalized data set from the gauging locations to points of interest with no records.

This report on the natural flow of the Willow Creek basin is composed of sections which describe the basin geography (Section 2), the analytical approach of the study (Section 3), water use within the basin (Section 4), the derivation of historical natural flows at gauging locations (Section 5) and the derivation of historical natural flows at ungauged points of interest - Project Sites (Section 6).

2. BASIN GEOGRAPHY

The Willow Creek Basin (Figure 2.1) is situated in south-western Alberta approximately 30 miles north-west of the City of Lethbridge. Originating on the eastern slopes of the Livingstone Range, near Mount Burke, it flows in a south-easterly direction for a distance of approximately 15 miles before draining into the man-made Chain Lakes Reservoir. From the reservoir it continues easterly, then swings into a southerly direction for a distance of four miles where it is joined by South Willow Creek, a tributary which also originates in the Livingstone range. From its confluence with South Willow Creek the stream swings into an easterly direction for a distance of 15 miles. While flowing eastward, Willow Creek is joined by a number of smaller streams, which include Lane Creek, Oxley Creek, and Pine Creek, draining a foothills area to the north. From this point Willow Creek swings into a southerly course through the western plains for a distance of 30 miles and receives waters from Trout Creek, Meadow Creek, and Kyiskap Creek; all streams originating in the Porcupine Hills, before emptying into the Oldman River one mile east of Fort MacLeod.

Mean annual precipitation ranges from a high in excess of 26 inches for the mountain region in the extreme north-western corner of the basin and rapidly decreases to less than 16 inches for the plains region in the eastern reaches of the basin. Conversely, mean annual gross evaporation ranges from a low of approximately 27 inches in the extreme north-western corner of the basin to a high of approximately 30 inches in the south-eastern corner.

3. STUDY APPROACH

The primary objective of the study is the development of a historical (1912-1983) natural streamflow data base which will allow the assessment of water management alternative for the Willow Creek basin. Towards this objective, monthly mean natural flow files will be required for the following seven hydrometric station locations and three project sites:

TABLE 3.1: Locations of Historical Natural Flow Files

=====			
A. LOCATION OF HYDROMETRIC STATIONS			

	Station Code	Drainage Area (km ²)	Station Name

1.	C5AB002	2290	Willow Creek near Nolan
2.	C5AB005	440	Trout Creek near Granum
3.	C5AB021	1160	Willow Creek near Claresholm
4.	C5AB028	163	Willow Creek above Chain Lake
5.	C5AB029	130	Meadow Creek near the Mouth
6.	C5AB038	191	Kyiskap Creek near Granum
7.	C5AB039	730	Willow Creek below Lane Creek

B. LOCATION OF POINTS OF INTEREST			

	Station Code	Drainage Area (km ²)	Location Purpose

1.	GA1	1117	Willow Creek @ 12-13-28-W4 Inflow to potential reservoir
2.	GA2	87.2	Pine Creek @ 31-13-28-W4 Inflow to potential reservoir
3.	GA2A	950	Willow Creek @ 31-13-28-W4 Potential point of diversion
4.	GA3	682	Willow Creek @ 2-14-30-W4 Inflow to potential reservoir
=====			

Since the monthly streamflow records for the hydrometric station locations reflect human activity in the basin and relatively incomplete, the monthly mean natural flows at these sites had to be reconstructed before they could be utilized in the assessment of water management alternatives. Also, since there are no streamflow records at

the points of interest it was necessary to transfer streamflow information from the hydrometric station locations to these sites in order to develop the required data base.

The naturalization of recorded flows at the hydrometric station locations was carried out using the project depletion method. The procedure starts with the monthly recorded streamflows (the A Files) and adjusts the recorded streamflows by adding or subtracting the monthly consumptive uses (the J Files) due to man-made projects. The result is a set of monthly natural streamflows (the B Files). Since the naturalized record may not encompass the entire study period of 1912 to 1983, the next step was to extend the recorded period to the study period. This was done by correlating the B Files for each hydrometric station location with B Files and/or non-regulated streamflow records of other nearby hydrometric stations having a more complete data base. Equations resulting from the correlation were subsequently used to fill in the missing data for hydrometric station locations in the Willow Creek basin. The complete study period natural flows at hydrometric station locations are termed the C Files. For the four points of interest where no streamflow data exists, the natural flows were derived by calculations based on the C-Files. The natural streamflow data for the points of interest are contained in the G-File.

4. BASIN WATER USE

Historical basin water use (the J-File) is defined as the monthly flow adjustment which must be added to the recorded flows at a gauging station in order to reconstruct the natural monthly flows at that site. Since the monthly flow adjustment for a site represents the integrated effect of all upstream water use projects, the first step in the analysis is the identification of all upstream water use projects and their period of operation. For the purpose of this study, a water use project has been defined as consisting solely of licenced and/or authorized projects which are located within the effective drainage area of the basin, and which consume or modify the flow which would have been experienced in Willow Creek. While it is realized that this definition neglects the effects of drainage projects, land use changes, unlicenced withdrawals, and withdrawals from non-effective areas; it was felt that the modifying effects of these projects would be negligible or non-quantifiable and therefore could be omitted from the analysis. Based on this definition, water use projects within the Willow Creek basin were identified from Alberta Environment's computer files of water rights projects. The projects were subsequently assembled according to their location relative to hydrometric gauging sites and are presented in Appendix A, Table A-1. Table A-1 also provides a listing of the year the project was authorized, the purpose, the area being irrigated (where applicable), the quantity of water allocated, reservoir specifications (where applicable), and upstream drainage areas.

Having identified the water use projects in the basin, it was necessary to determine the quantity and time distribution of consumptive uses. The method initially proposed for this aspect of the study was to assume that all licenced projects come into effect one year after the date of authorization, and received their full allocation every year. However, after reviewing Table A-1 and Water Rights files, it becomes apparent that the drainage area upstream of many of the licences was inadequate in terms of supplying the allocated quantity during years of below average runoff and that the use of the above noted procedure would result in an over-estimation of the adjustments required to naturalize

monthly flows. In this regard, the procedure for the derivation of historical water uses was modified such that, with the exception of domestic licences, only consumptive uses which could be reliably quantified, from water use reports and/or correspondence in Water Rights files, were incorporated in the analysis. Domestic licences account for less than 1% of all licences, are generally located near local springs and were therefore assumed to receive their full allocation every year. Monthly consumptive uses, for upstream of each of the gauging locations, computed by this procedure are summarized in Appendix A, tables A-2 to A-10. Figures A-1 to A-10, Appendix A provide a visual summary as to the total licenced volume for upstream of each of the gauging locations as well as the volume allocated to licences which did not report the quantity consumed in a given year. Figure A-10 reads that in 1983 the total licenced allocation was approximately 17,500 acre feet and the total allocation to licences which did not report their actual consumption for the year was approximately 2,800 acre-feet.

5. NATURAL FLOWS FOR HYDROMETRIC SITES

Natural flow is the flow of water which would occur at a particular site if there was no upstream human interference. Natural flows for the nine Water Survey of Canada (WSC) hydrometric stations in the Willow Creek basin were computed by adding the historical water uses by projects upstream of each recording station (J-Files in Appendix A, Tables A-2 to A-10) to the recorded flows (A-Files in Appendix B, Tables B-1 to B-9) at the corresponding station. The resulting arrays of monthly natural flows for each recording site (the B-Files) are presented in Appendix C, Tables C-1 to C-9.

The streamflows (B-files) created by the above procedure represent the calculated natural flows for the period of record at the hydrometric stations. Since the period of record at the hydrometric stations does not encompass the entire study period of 1912 to 1983, the next step was to extend the recorded period to the study period. Extension of the recorded period to the study period was carried out by correlation analyses. In the correlation analysis, the B-File for each station identified in Section 3 was correlated to the B-Files of all combinations of the other hydrometric stations in the Willow Creek basin* using a stepwise logarithmic linear regression so as to develop regression equations which could be used to estimate missing hydrometric records. The resulting regression equations were then ranked in terms of priorities with the highest priority being assigned to the equation which, based on the adjusted (to account for the degrees of freedom) standard error of estimate and the adjusted coefficient of correlation, gave the best estimate for missing hydrometric records. The regression equation which gave the best estimate of monthly streamflow and which was assigned priority No. 1 was then used to estimate as many values as possible for a particular station. The regression equation assigned

* Included in the correlation analysis are B-File data for station 05BL009 (Highwood River near Aldersyde) and 05BL007 (Stimson Creek near Pekisko) which were generated for the 'South Saskatchewan River Basin Historical Natural Flows' study of 1982 and which are duplicated in Appendix B, Tables B-10 and B-11.

priority No. 2 was then used to estimate values not filled in by the first priority and so on. In all cases the resulting values were visually inspected to ensure that they were physically reasonable. The resulting extended (1912 to 1983) natural flow arrays (C-Files) for hydrometric stations in the Willow Creek basin are presented in Appendix D, Tables D-1 to D-7. The regression results are presented in Appendix D in a supplementary table opposite the corresponding natural flow array.

6. NATURAL FLOWS AT PROJECT SITES

The Willow Creek basin planning study required that estimates of monthly natural flows be developed at four locations which are not hydrometric stations. These locations have been termed as 'project sites' and are listed in Table 3.1 of Section 3.

Arrays of monthly natural flows for the project sites (G-Files) were derived from data in the C-Files and were based upon drainage area ratios between the project site and appropriate C-Files. Where C-File data were available for points both upstream and downstream of a project site, the G-File data was derived using the following area relation:

$$Q_{ps} = Q_u + [Q_d - Q_u] \times \left[\frac{A_{ps} - A_u}{A_d - A_{ps}} \right] \quad \dots(1)$$

where, Q is the monthly natural flow

A is the gross drainage area while the subscripts ps , u , and d represent the project site and upstream and downstream C-file data sites respectively.

Where C-File data was available for a single point, either upstream or downstream of project site or on a nearby representative stream, the G-File data was derived using the following area relation:

$$A_{ps} = Q_c \times A_{ps}/A_c \quad \dots(2)$$

where, the subscript ' c ' represents the C-File data site.

The resulting natural flow arrays for each of the four project sites are presented in Appendix E, Tables E-1 to E-4.

7. DISCUSSION OF RESULTS

This study has produced a set of monthly natural flows at seven hydrometric station locations and four project sites in the Willow Creek basin. The natural flows for the hydrometric station locations were derived from streamflow records, reservoir data, recorded project water use information and climate data. In the naturalization of flows, all licenced man-made projects with sufficient data to quantify the quantity of water consumed have been accounted for in years when their consumption could be quantified. Licenced projects having no information on which to quantify their water use were not included in the naturalization of flows. The total licenced quantity for projects having no water use information is in the order of 3500 acre-feet or approximately 1% of the flow in the basin. The actual water use by these licences is believed to be substantially lower. This is especially true in years of low flow when there is insufficient water to meet their demands. In this regard, it is felt that the omission of these water uses has not affected the general high level of quality of the derived data.

A P P E N D I X A

Willow Creek Basin (J-Files)

Arrays of Historical Water Uses

TABLE A-1
WILLOW CREEK BASIN - WATER USES

File #	Legal Location	Year Authorized	Purpose	Irrigated Area (Acres)	Licensed Allocation (ac-ft)	Reservoir S.A. (acres)	Capacity (ac-ft)	Drainage Area (sq.mi.)
UPSTREAM OF STATION 05A8028								
357a	SW28-14-02-W5	1907	IRR	25	38	-	-	59.73
BETWEEN 05A8028 AND 05A8039								
357b	NE28-14-02-W5	1907	IRR	14	21	-	-	1.10
6863	SE27-14-02-W5	1965	RES	-	4890	-	-	70.30
11506	SE01-15-02-W5	1963	DOM	-	2	1.0	2.9	0.24
20931	SE05-15-01-W5	1962	DOM	-	8	-	-	0.22
17148	NE30-14-01-W4	1975	DOM	-	0	-	-	0.61
11029	SW25-14-01-W5	1963	DOM	-	5	1.0	5.9	0.74
11070	SW14-14-01-W5	1962	DOM	-	2	1.0	1.9	0.16
11028	SW13-14-01-W5	1963	DOM	-	15	4.0	22.0	0.74
4494	SW14-14-30-W4	1938	DOM	-	4	1.0	6.0	1.40
10883	NE08-14-01-W5	1962	DOM	-	1	1.0	1.8	0.27
557	SE21-14-01-W5	1912	IRR	90	135	-	-	4.32
11346	SW14-14-02-W5	1963	DOM	-	3	1.0	3.8	0.52
10650	NW05-15-29-W4	1962	DOM	-	2	1.0	2.1	0.36
4956(1)	NE31-14-29-W4	1945	DOM	-	1	1.0	1.0	0.01
4956(2)	NE31-14-29-W4	1983	DOM	-	4	2.0	3.0	0.04
11175	SE31-14-29-W4	1963	DOM	-	5	2.0	6.6	0.12
63(1)	NW18-14-29-W4	1896	IRR	648	972	-	-	10.94
63(2)	NW18-14-29-W4	1978	PROJECT IN POOR CONDITION AND NOT USED	-	-	-	-	10.94
63(3)	NW18-14-29-W4	1982	IRR	461	620	50.0	256.0	10.94
556	SW30-13-02-W5	1914	IRR	110	165	-	-	2.63
512	SW30-13-02-W5	1914	IRR	40	60	-	-	12.45
531a	NW28-13-02-W5	1911	IRR	116	174	-	-	28.08
531b	SE33-13-02-W5	1911	IRR	64	96	-	-	1.02
369a	NW17-13-02-W5	1907	IRR	25	38	-	-	5.68
369b	SW17-13-02-W5	1907	IRR	60	90	-	-	5.29
530	SW16-13-02-W5	1911	IRR	90	182	-	-	23.28
570	SE22-13-02-W5	1912	IRR	16	24	-	-	0.64
10872	SE11-13-02-W5	1962	DOM	-	3	1.0	6.9	0.69
9402	NE02-13-02-W5	1958	DOM	-	1	0.5	N/A	1.23
10730	SE35-12-02-W5	1962	DOM	-	3	1.0	3.5	0.88
14565	SE35-12-02-W5	1982	IRR	88	88	-	-	0.88
228	NW26-13-01-W5	1906	IRR	17	26	-	-	0.03
10456	NW34-13-01-W5	1961	IRR	20	25	-	-	2.82
20958	NE26-13-01-W5	1903	IRR	196	294	-	-	0.99
20960	NE25-13-01-W5	1903	IRR	162	243	-	-	1.52
20979	NE25-13-01-W5	1947	DOM	-	5	2.0	6.0	1.57
20959	NE02-14-30-W4	1903	IRR	111	167	-	-	3.19
20961	NW02-14-30-W4	1903	IRR	162	243	-	-	3.20
20980	NW02-14-30-W4	1947	DOM	-	2	1.0	2.0	0.03
6039	SW19-13-29-W4	1941	DOM	-	3	2.0	5.5	0.24
BETWEEN 05A8039 AND 05A8021								
6437	NE16-13-29-W4	1945	DOM	-	8	1.5	8.0	0.18
11260	SE16-13-29-W4	1963	DOM	-	3	1.0	3.8	0.02
10416	SW22-13-29-W4	1962	DOM	-	6	1.0	5.7	0.88
11036	SE30-14-29-W4	1962	DOM	-	2	1.0	2.0	0.56
11035	SW20-14-29-W4	1962	DOM	-	5	1.0	7.2	0.97
8315a	SW22-14-29-W4	1949	DOM	-	3	1.0	3.0	0.30
8315b	NE21-14-29-W4	1949	DOM	-	1	1.0	2.0	0.41
20315	SE21-14-29-W4	1982	DOM	-	1	1.0	1.5	0.48
8315c	SE21-14-29-W4	1949	DOM	-	6	1.0	6.0	0.94
8315d	NW21-14-29-W4	1949	DOM	-	4	2.0	4.8	0.17
15574	NE34-13-29-W4	1982	IRR	36	54	-	-	309.43
16457	SW15-14-29-W4	1974	DOM	-	3	1.0	9.2	0.56
10548(2)	SE35-13-29-W4	1983	IRR	75	81	-	-	315.52
7538	NE10-13-29-W4	1947	DOM	-	5	2.0	5.0	0.15
10548(1)	SW30-13-28-W4	1965	IRR	75	50	-	-	325.98
6044	NW07-13-28-W4	1941	DOM	-	9	5.0	10	0.62
7431	SE04-15-29-W4	1956	DOM	-	1	1.0	1.5	0.26
3695	SW04-15-29-W4	1957	DOM	-	5	2.0	6.0	0.08
213	NE33-14-29-W4	1903	IRR	41	82	-	-	5.00
5577(1)	NW08-15-29-W5	1941	DOM	-	1	1.0	1.7	0.03
5577(2)	NW08-15-29-W5	1972	DOM	-	2	1.0	2.0	0.03
11037	SW09-15-29-W4	1962	DOM	-	2	1.0	2.0	0.96
10397	NW10-15-29-W4	1962	DOM	-	1	0.5	1.5	0.03
7300	SW10-15-29-W4	1957	DOM	-	6	2.0	6.0	1.83
7567	NW03-15-29-W4	1946	DOM	-	1	1.0	1.0	0.07
7301	NE02-15-29-W4	1946	DOM	-	3	1.0	3.0	0.78
7346	NE12-15-29-W4	1946	DOM	-	1	1.0	0.6	0.05
7292	NE01-15-29-W4	1946	DOM	-	3	1.0	3.0	0.58

'a' and 'b' - designates licences having the same file number and running concurrently

(1),(2) etc - designates a revision to an existing licence

S.A. - Reservoir surface area

CAP - Reservoir capacity

IRR - Irrigation

DOM - Domestic

MUN - Municipal

D.U. - Ducks Unlimited

Table A-1 continued

TABLE A-1 Continued
WILLOW CREEK BASIN - WATER USES

File #	Legal Location	Year Authorized	Purpose	Irrigated Area (Acres)	Licensed Allocation (ac-ft)	S.A. (acres)	Reservoir Capacity (ac-ft)	Drainage Area (sq.mi.)
BETWEEN 05A039 AND 05A021								
17385	SE25-14-29-W4	1976	DOM	-	3	1.0	5.9	0.46
19607	NE27-14-29-W4	1980	DOM	-	1	1.0	0.8	0.17
11571	SW27-14-29-W4	1964	DOM	-	5	1.0	5.3	0.10
7430	SE27-14-29-W4	1947	DOM	-	2	1.0	1.5	0.14
11042	NE22-14-29-W4	1962	DOM	-	2	1.0	1.7	0.08
19040	SW24-14-29-W4	1982	IRR	145	134	-	-	21.48
2111	SE13-14-29-W4	1931	DOM	-	0	0	-	23.87
7490	SE08-14-28-W4	1982	DOM	-	3	2.0	7.0	0.11
10208	NE04-14-28-W4	1960	DOM	-	3	2.0	3.2	0.37
6953	SE05-14-28-W4	1944	DOM	-	2	1.0	1.8	0.18
19174	NW27-13-28-W4	1981	IRR	24	26	-	-	368.51
11041	SE04-15-28-W4	1962	DOM	-	1	1.0	9.0	0.84
7295	NE04-15-28-W4	1945	DOM	-	5	2.0	5.5	1.30
19882	NW34-14-28-W4	1980	DOM	-	3	1.0	5.7	0.19
18821	SW23-14-28-W4	1978	DOM	-	8	3.0	6.0	5.17
11128	SW36-13-28-W4	1975	IRR	130	130	-	-	14.11
11633	NW02-14-28-W4	1964	DOM	-	3	1.0	4.0	0.09
18538	NW21-14-28-W4	1978	DOM	-	9	5.0	16	0.90
6110	NE16-13-28-W4	1941	DOM	-	3	1.0	4.0	1.04
18510	SE12-13-28-W4	1981	IRR	27	38	-	-	431.43
20196	SE12-13-28-W4	1983	IRR	82	109	-	-	431.43
18403a	NW01-13-28-W4	1982	IRR	88	112	-	-	431.57
18403b	NW01-13-28-W4	1977	IRR	73	51	-	-	435.09
9977	SW17-13-28-W4	1959	DOM	-	2	1.0	3.0	0.10
20201	NW08-13-28-W4	1982	DOM	-	2	1.0	4.6	0.10
11034	NE08-13-28-W4	1962	DOM	-	4	1.0	4.2	0.68
21270	NE08-13-270W4	1972	DOM	-	2	1.0	5.4	0.68
9571	NE04-13-28-W4	1956	DOM	-	3	1.0	2.6	0.79
8005a	SW10-13-28-W4	1949	DOM	-	15	4.0	17	3.48
8005b	SW11-13-28-W4	1982	IRR	67	60	9.0	75	3.48
3953	NE10-13-28-W4	1938	DOM	-	20	9.0	28	4.49
10376	NW11-13-28-W4	1961	DOM	-	9	9.0	14	5.29
18799	SW36-12-28-W4	1981	IRR	38	54	-	-	444.85
436	NE23-12-28-W4	1960	MUN	-	1171	-	-	446.58
UPSTREAM OF STATION 05A005								
8384	NW05-13-29-W4	1953	IRR	20	30	-	-	99.33
15803	SE33-12-29-W4	1978	DOM	-	2	1.0	2.4	0.69
10005	NW02-13-29-W4	1959	DOM	-	2	2.0	2.8	0.17
161	SW34-12-29-W4	1897	IRR	126	264	-	-	25.57
10977	SW35-12-29-W4	1962	DOM	-	3	1.0	4.2	0.70
9669	NW26-12-29-W4	1960	IRR	403	202	-	-	29.17
11805	NW22-12-29-W4	1965	DOM	-	2	1.0	3.5	0.17
9661a	NE22-12-29-W4	1957	DOM	-	4	1.0	4.3	0.43
10639a	NW24-12-29-W4	1961	DOM	-	5	1.0	6.2	0.95
10639b	SW24-12-29-W4	1961	DOM	-	8	1.0	10	0.23
21023	SW13-12-29-W4	1984	DOM	-	5	3.0	20	1.34
12524	NW07-12-28-W4	1969	DOM	-	2	1.0	2.1	0.22
17245	NW08-12-28-W4	1975	DOM	-	2	1.0	2.5	0.63
10868	NW20-12-29-W4	1962	DOM	-	2	1.0	6.9	0.54
11763	NW16-12-29-W4	1964	DOM	-	3	1.0	3.9	0.19
96616	NW15-12-29-W4	1957	DOM	-	9	1.0	9.8	0.40
12019	NW10-12-29-W4	1966	DOM	-	2	1.0	2.0	0.95
10640	NE15-12-29-W4	1962	DOM	-	3	1.0	3.4	0.25
10661	SE10-12-29-W4	1964	DOM	-	3	1.0	5.0	0.25
10849	SE05-12-29-W4	1962	DOM	-	3	1.0	4.9	1.07
10439	SW09-11-29-W4	1961	DOM	-	2	1.0	2.0	1.19
7479	NW10-11-29-W4	1947	DOM	-	7	1.0	7.0	2.35
16599	NE32-11-28-W4	1977	IRR	36	36	-	-	162.03
734	SE34-11-28-W4	1916	IRR	10	15	-	-	164.59
19783	SE03-12-28-W4	1981	IRR	40	43	-	-	165.85
12257	SE09-12-28-W4	1968	DOM	-	3	1.0	3.2	0.19
UPSTREAM OF STATION 05A006								
10756(1)	NE13-11-29-W4	1962	IRR	23	15	-	-	0.24
10756(2)	NE13-11-29-W4	1981	DOM	-	3	1.0	7.3	0.24
11109	NW35-10-29-W4	1963	DOM	-	3	1.0	3.3	0.20
11229	NW17-11-28-W4	1963	IRR	35	24	-	-	35.53

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(1),(2) etc - designates a revision to an existing licence
S.A. - Reservoir surface area
CAP - Reservoir capacity
IRR - Irrigation
DOM - Domestic
MUN - Municipal
D.U. - Ducks Unlimited

TABLE A-1 Continued
WILLOW CREEK BASIN - WATER USES

File #	Legal Location	Year Authorized	Purpose	Irrigated Area (Acres)	Licensed Allocation (ac-ft)	Reservoir S.A. (acres)	Capacity (ac-ft)	Drainage Area (sq.mi.)
BETWEEN 05AB006 AND 05AB029								
10998	SW26-11-28-W4	1962	IRR	100	65	-	-	40.13
10897	NW25-11-28-W4	1962	DOM	-	1	1.0	2.2	0.06
10896	SE25-11-28-W4	1962	DOM	-	1	1.0	1.6	46.36
5905	NW30-11-27-W4	1963	IRR	60	40	-	-	49.65
8824	SE31-11-27-W4	1956	IRR	74	50	-	-	49.84
MEADOW CREEK DOWNSTREAM OF 05AB029								
11081	NE30-11-27-W4	1963	IRR	44	48	-	-	0.03
BETWEEN STATIONS 05AB021, 05AB005, 05AB029, AND 05AB015								
11636	NW20-12-28-W4	1964	DOM	-	2	1.0	2.0	0.49
9906	NW21-12-28-W4	1959	DOM	-	3	1.0	4.4	0.69
18518	NE22-12-28-W4	1978	D.U.	N/A	34	23	123	13.20
19243	SW26-12-28-W4	1982	DOM	-	8	5.0	32	0.09
17846(1)	NE14-12-28-W4	1978	IRR	84	127	-	-	463.27
17846(2)	NE14-12-28-W4	1982	IRR	60	90	-	-	463.27
19467	NE14-12-28-W4	1982	IRR	208	277	-	-	463.32
10361(1)	NW13-12-28-W4	1961	IRR	60	40	-	-	463.84
10361(2)	NW13-12-28-W4	1982	IRR	60	85	-	-	463.84
18061	NE18-12-27-W4	1977	IRR	135	203	-	-	1.00
8584(1)	SW18-12-27-W4	1958	IRR	65	98	-	-	483.61
8584(2)	SW18-12-27-W4	1982	IRR	62	82	-	-	483.61
18136	NW07-12-27-W4	1982	IRR	29	41	-	-	484.39
19687a	NE07-12-27-W4	1967	-	-	NIL	-	-	484.45
11688(1)	NE07-12-27-W4	1969	IRR	247	350	-	-	485.58
11688(2)	NE07-12-27-W4	1976	IRR	445	631	-	-	485.58
14578	NW05-12-27-W4	1982	IRR	62	82	-	-	491.72
8579	NE32-11-27-W4	1957	IRR	138	75	-	-	665.42
20341	NW33-11-27-W4	1982	IRR	200	266	-	-	719.02
2442a	NE28-11-27-W4	1962	IRR	27	38	-	-	721.29
18420	NE28-11-27-W4	1982	IRR	132	176	-	-	721.49
2442b	NE28-11-27-W4	1964	IRR	60	85	-	-	721.98
9729	NW27-11-27-W4	1958	IRR	25	35	-	-	722.01
19687b	SE35-12-27-W4	1969	-	-	NIL	-	-	1.30
19444	SE35-12-27-W4	1983	IRR	71	84	5.7	23	1.30
21166	SW27-11-27-W4	1984	IRR	116	116	-	-	743.61
20195	NW22-11-27-W4	1983	IRR	132	176	-	-	744.68
40257	SE22-11-27-W4	1984	-	-	NIL	-	-	744.61
40155	SW26-11-27-W4	1982	-	-	NIL	-	-	0.67
16626a	SW23-11-27-W4	1982	IRR	92	123	-	-	749.68
13287	NW24-11-27-W4	1971	IRR	74	74	N/A	62	4.34
16626b	NE14-11-27-W4	1975	IRR	84	127	-	-	755.59
9663	SE14-11-27-W4	1957	IRR	200	100	-	-	756.69
21113	NW06-11-26-W4	1984	IRR	14	17	-	-	772.05
21112	NW06-11-26-W4	1984	IRR	34	39	-	-	772.14
19784	NW06-11-26-W4	1982	IRR	83	111	-	-	772.21
10455(1)	NE01-11-27-W4	1961	IRR	60	60	-	-	772.65
10455(2)	NE01-11-27-W4	1975	IRR	48	72	-	-	772.65
10455(3)	NE01-11-27-W4	1977	IRR	224	224	-	-	772.65
20528	SE01-11-27-W4	1983	IRR	628	704	-	-	772.95
19518	SW06-11-26-W4	1982	IRR	129	172	-	-	773.19
UPSTREAM OF STATION 05AB038								
10948	SW05-11-28-W4	1963	DOM	-	3	1.0	3.3	0.11
9578	NE04-11-28-W4	1956	DOM	-	5	2.0	6.0	0.44
7621	NE12-11-28-W4	1947	DOM	-	4	2.0	4.0	4.69
12132	NW29-10-28-W4	1967	DOM	-	2	1.0	2.5	0.95
12130	NE19-10-28-W4	1967	DOM	-	8	4.0	10	.064
12129	NW18-10-28-W4	1967	DOM	-	4	1.0	5.1	0.14
1380	NE21-10-28-W4	1922	IRR	8	8	-	-	9.70
12131	NE28-10-28-W4	1967	DOM	-	2	1.0	2.1	0.46
20948	SW21-10-28-W4	1922	IRR	9	9	-	-	6.45
9686	NE26-10-28-W4	1957	DOM	-	2	1.0	2.2	20.51
6147	SW35-10-28-W4	1944	DOM	-	3	1.0	3.0	0.60
8034	NW13-10-28-W4	1952	DOM	-	4	1.0	4.4	5.88
13812	SW19-10-27-W4	1972	IRR	138	218	35	32.6	7.39
BETWEEN 05AB038, 05AB015, AND 05AB022								
1377	NW36-10-27-W4	1950	IRR	25	33	-	-	774.75
283a	SW36-10-27-W4	1977	MUN	-	100	-	-	775.92
283b	SW36-10-27-W4	1977	MUN	-	50	-	-	776.00

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DOM - Domestic
MUN - Municipal
D.U. - Ducks Unlimited

TABLE A-1 Concluded
WILLOW CREEK BASIN - WATER USES

File #	Legal Location	Year Authorized	Purpose	Irrigated Area (Acres)	Licensed Allocation (ac-ft)	S.A. (acres)	Reservoir Capacity (ac-ft)	Drainage Area (sq.mi.)
18015	SW36-10-27-W4	1982	IRR	29	41	-	-	776.03
18095	SW24-10-27-W4	1982	IRR	133	189	-	-	780.40
19798	NW13-10-27-W4	1980	DOM	-	1	-	-	781.42
9659a	SW13-10-27-W4	1960	IRR	66	66	-	-	791.37
9659b	SW13-11-27-W4	1973	IRR	276	391	-	-	791.37
16686	SE14-10-27-W4	1975	IRR	266	332	-	-	791.59
15276(1)	NE11-10-27-W4	1975	IRR	292	437	-	-	791.78
15276(2)	NE11-11-27-W4	1982	IRR	352	499	-	-	791.78
18917	NW02-10-27-W4	1980	IRR	135	147	-	-	80.65
20598	NW01-10-27-W4	1983	IRR	196	261	-	-	880.70
6190	SW01-10-27-W4	1982	IRR	262	349	13	20	881.76

DOWNSTREAM OF STATION 05AB022

13792	SW06-10-26-W4	1972	IRR	235	236	-	-	889.14
16416	NW31-09-26-W4	1974	IRR	107	107	-	-	889.72
20700(1)	NW31-09-26-W4	1976	IRR	156	208	-	-	889.72
20700(2)	NW31-09-26-W4	1983	IRR	127	170	20	82	889.72
12312	SW28-09-26-W4	1968	IRR	30	30	-	-	904.27
18645	SE21-09-26-W4	1978	IRR	70	100	-	-	904.79
17687(1)	SE22-09-26-W4	1976	IRR	251	315	-	-	907.46
17687(2)	SE22-09-26-W4	1977	IRR	310	388	-	-	907.46
18565	NE22-09-26-W4	1981	IRR	108	154	-	-	907.61
16293	NW23-09-26-W4	1983	IRR	30	40	-	-	908.31
20226	NE22-09-26-W4	1984	IRR	9	12	-	-	908.31
20730	NE27-09-26-W4	1984	DOM	-	2	2.0	10	0.18
21111	NW24-09-26-W4	1984	IRR	52	56	-	-	916.60
21268	NE24-09-26-W4	1984	-	-	NIL	-	-	917.36
16532	NW30-09-25-W4	1974	IRR	62	78	-	-	924.64

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(1),(2) etc - designates a revision to an existing licence

S.A. - Reservoir surface area

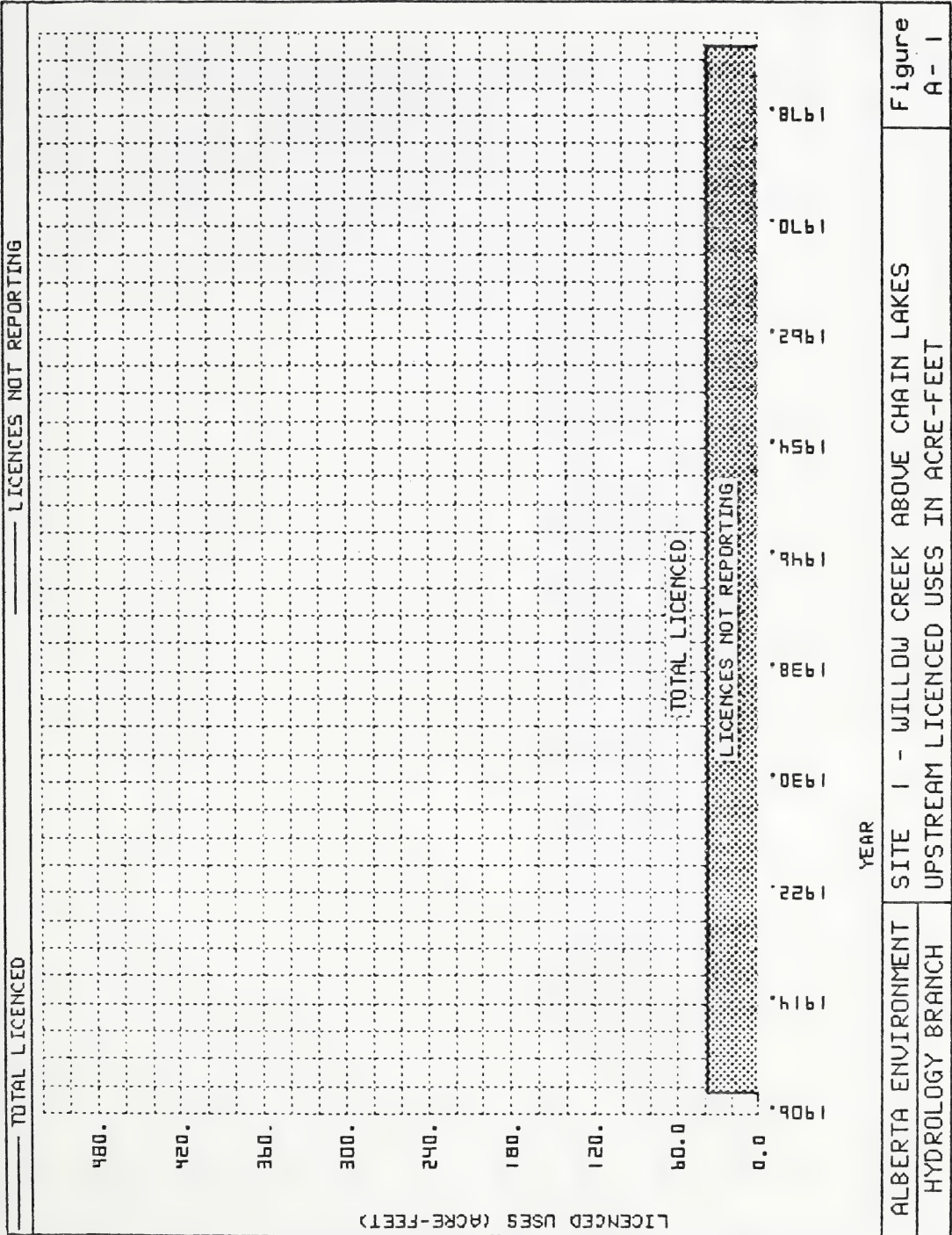
CAP - Reservoir capacity

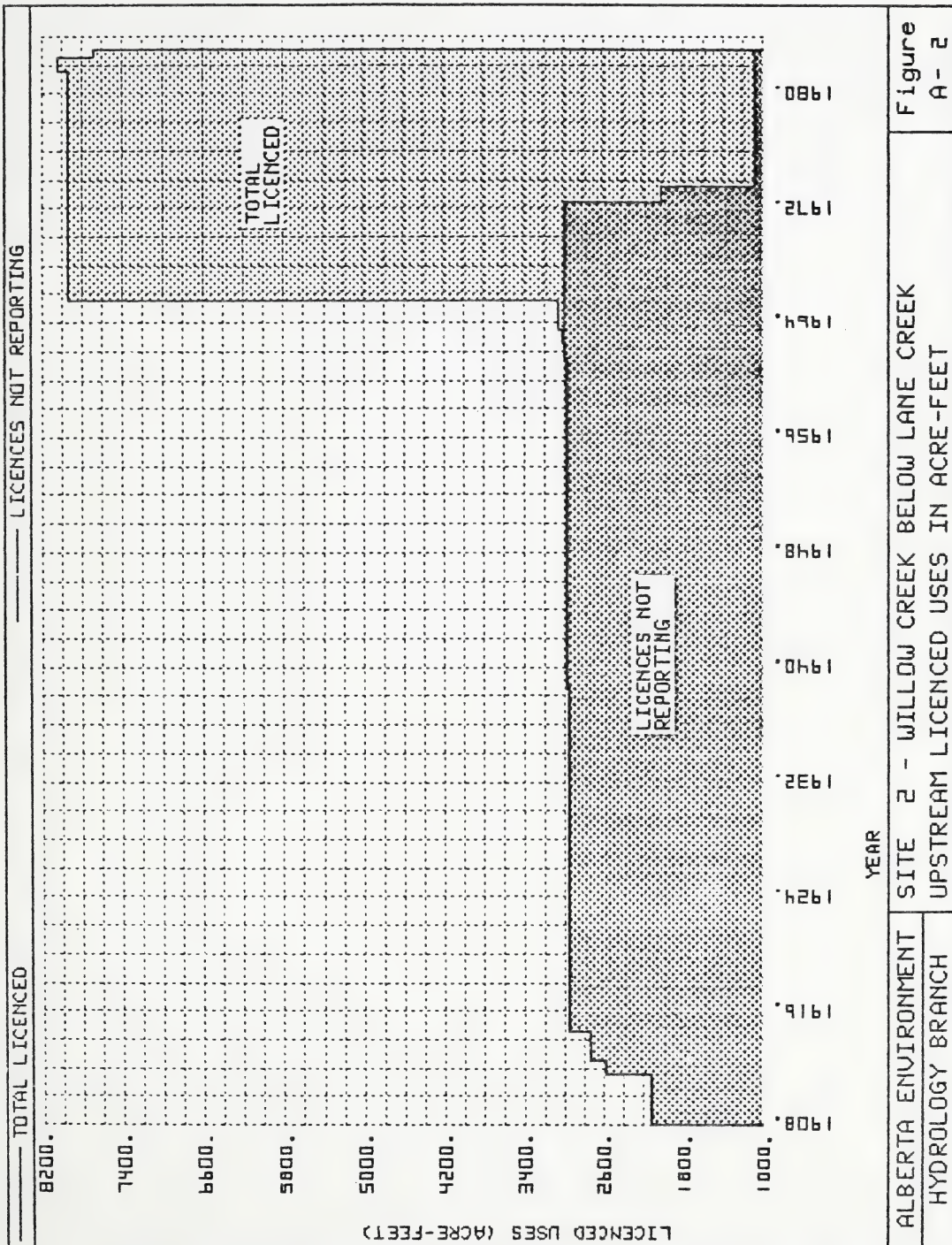
IRR - Irrigation

DOM - Domestic

MUN - Municipal

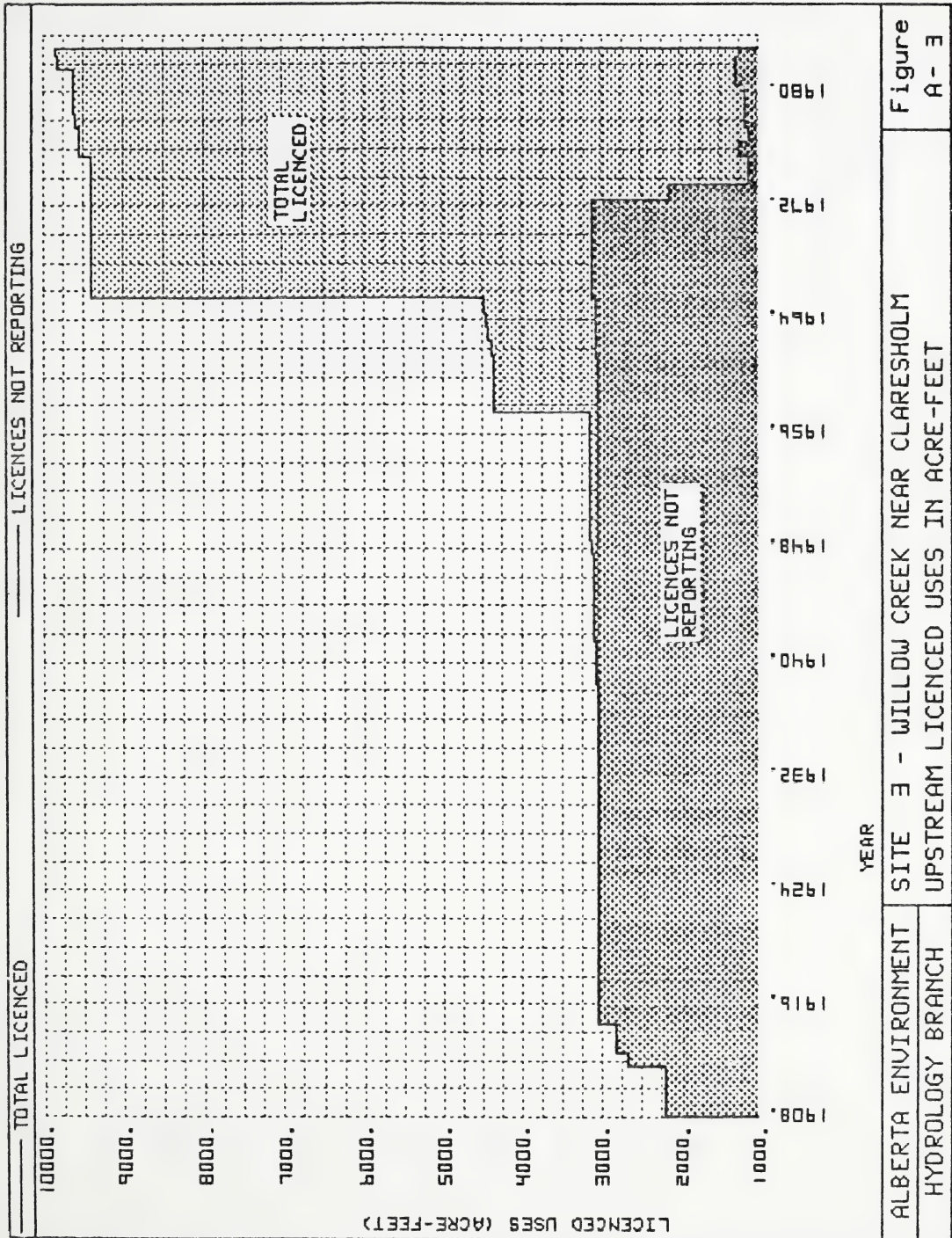
D.U. - Ducks Unlimited

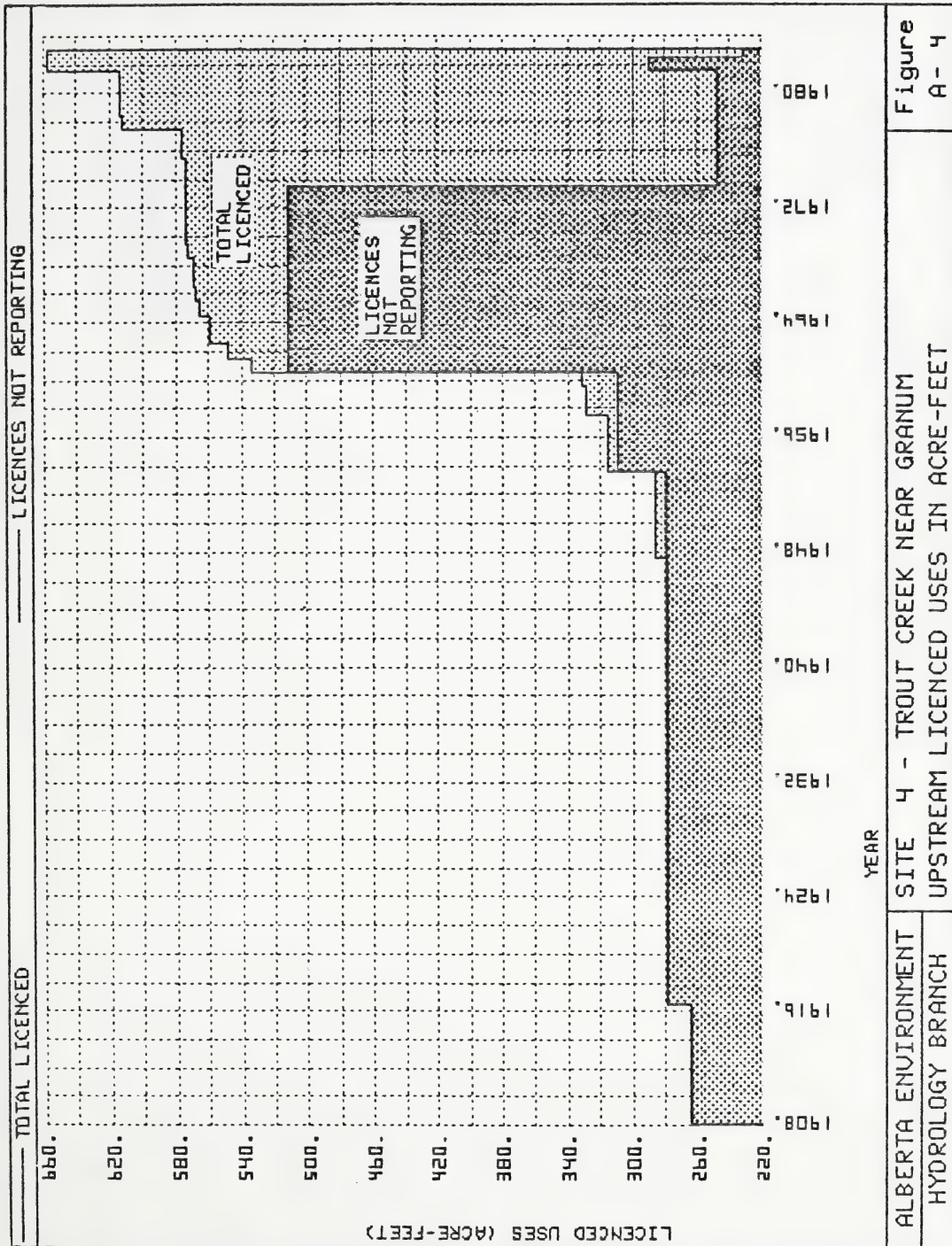


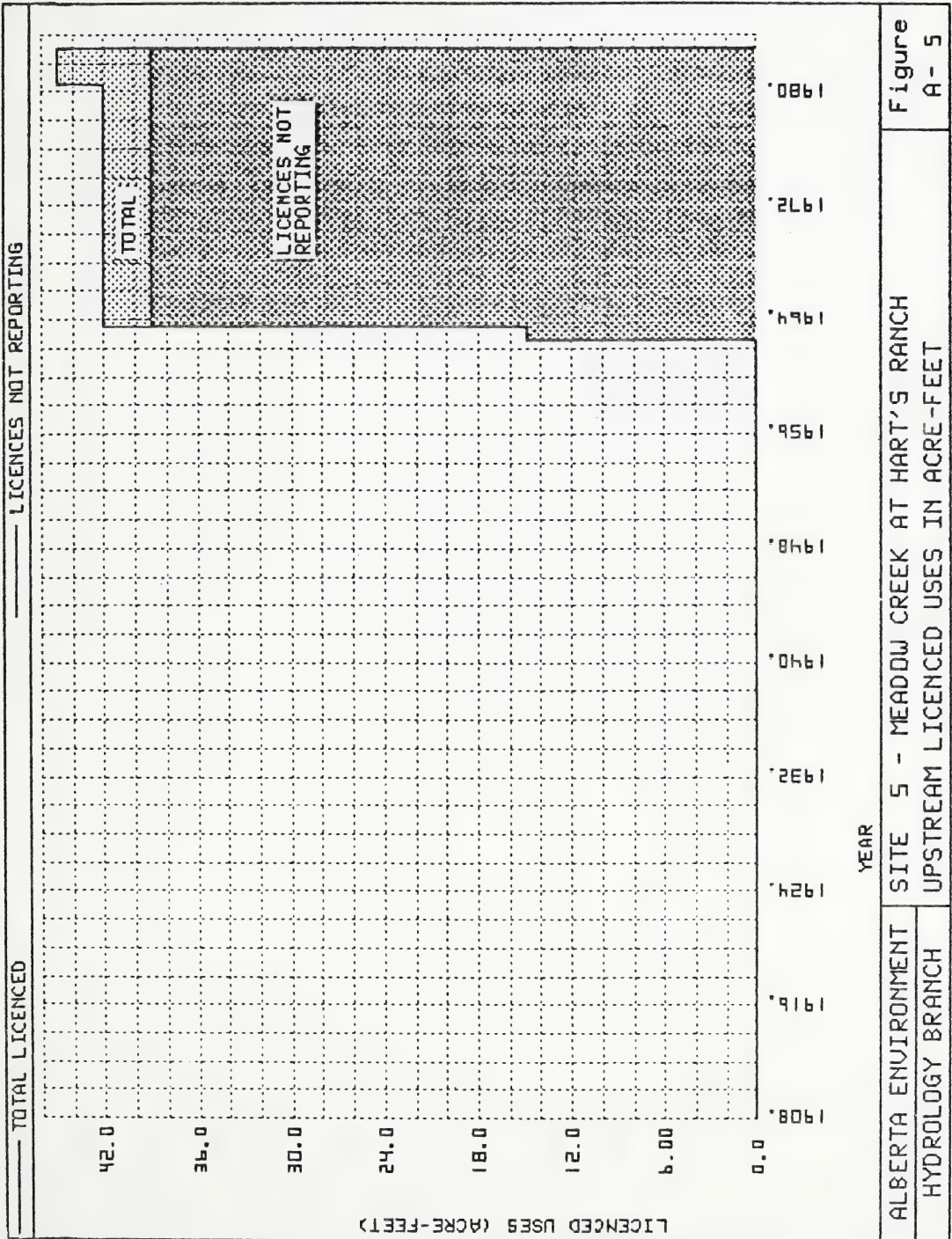


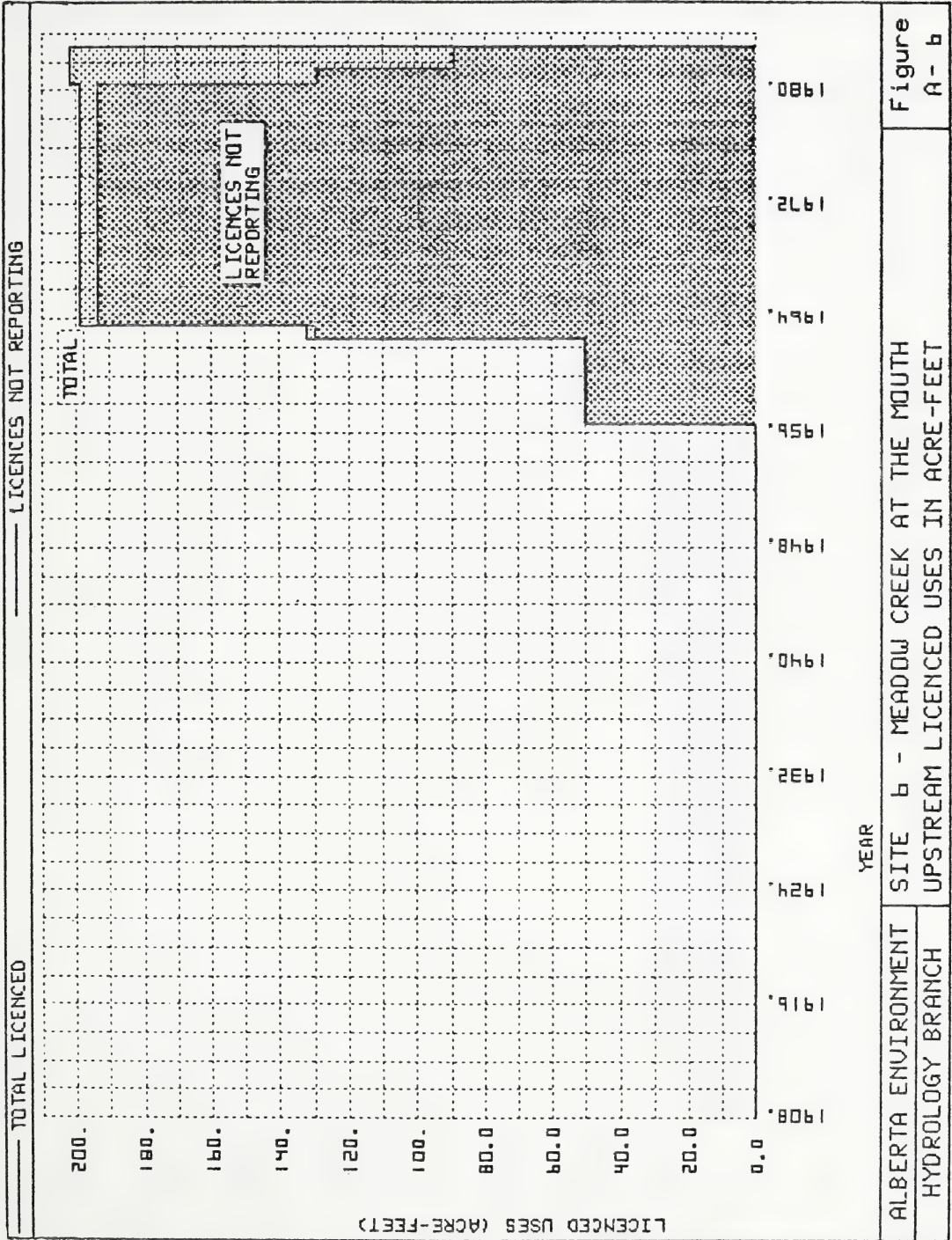
ALBERTA ENVIRONMENT
HYDROLOGY BRANCH

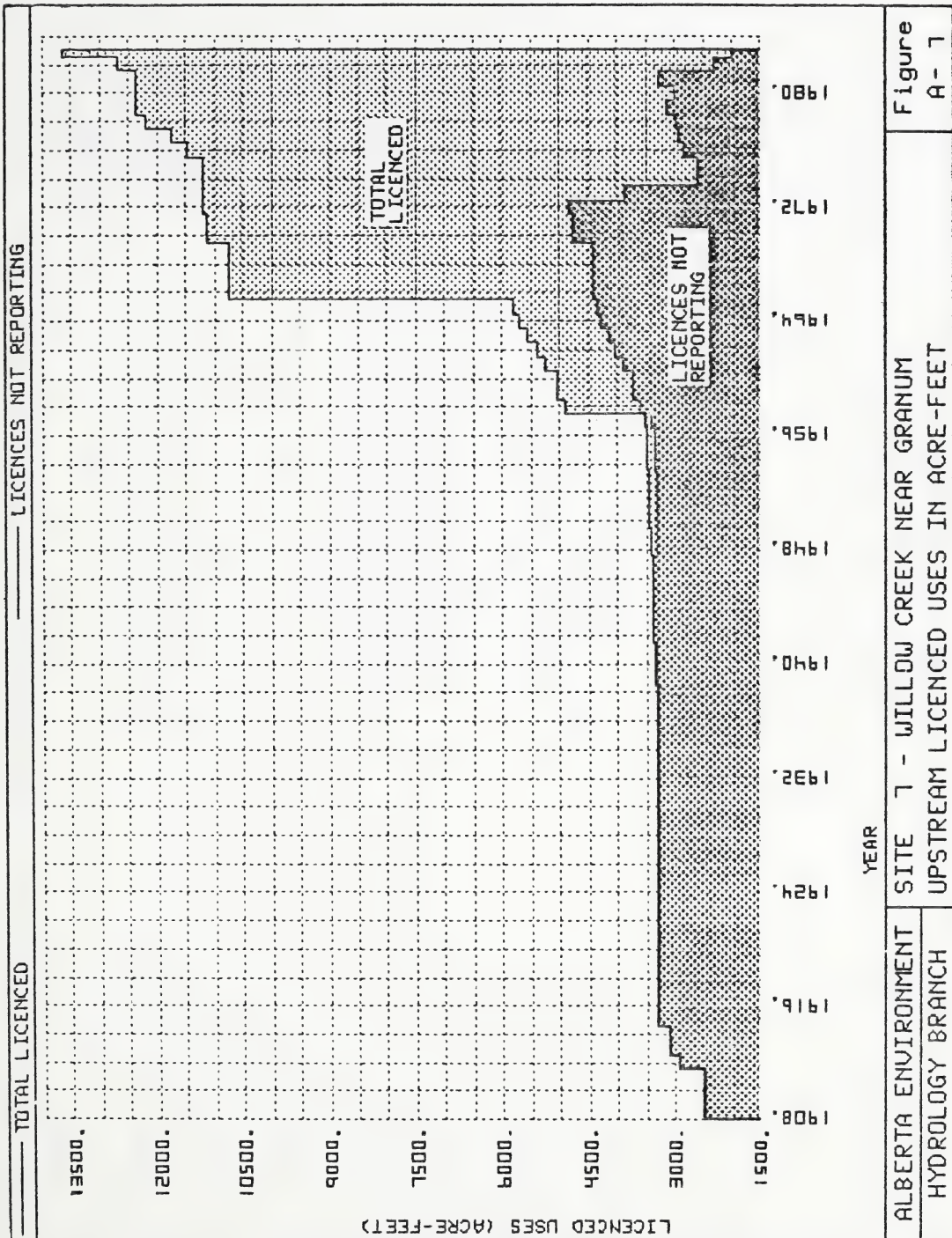
SITE 2 - WILLOW CREEK BELOW LANE CREEK
UPSTREAM LICENCED USES IN ACRE-FEET

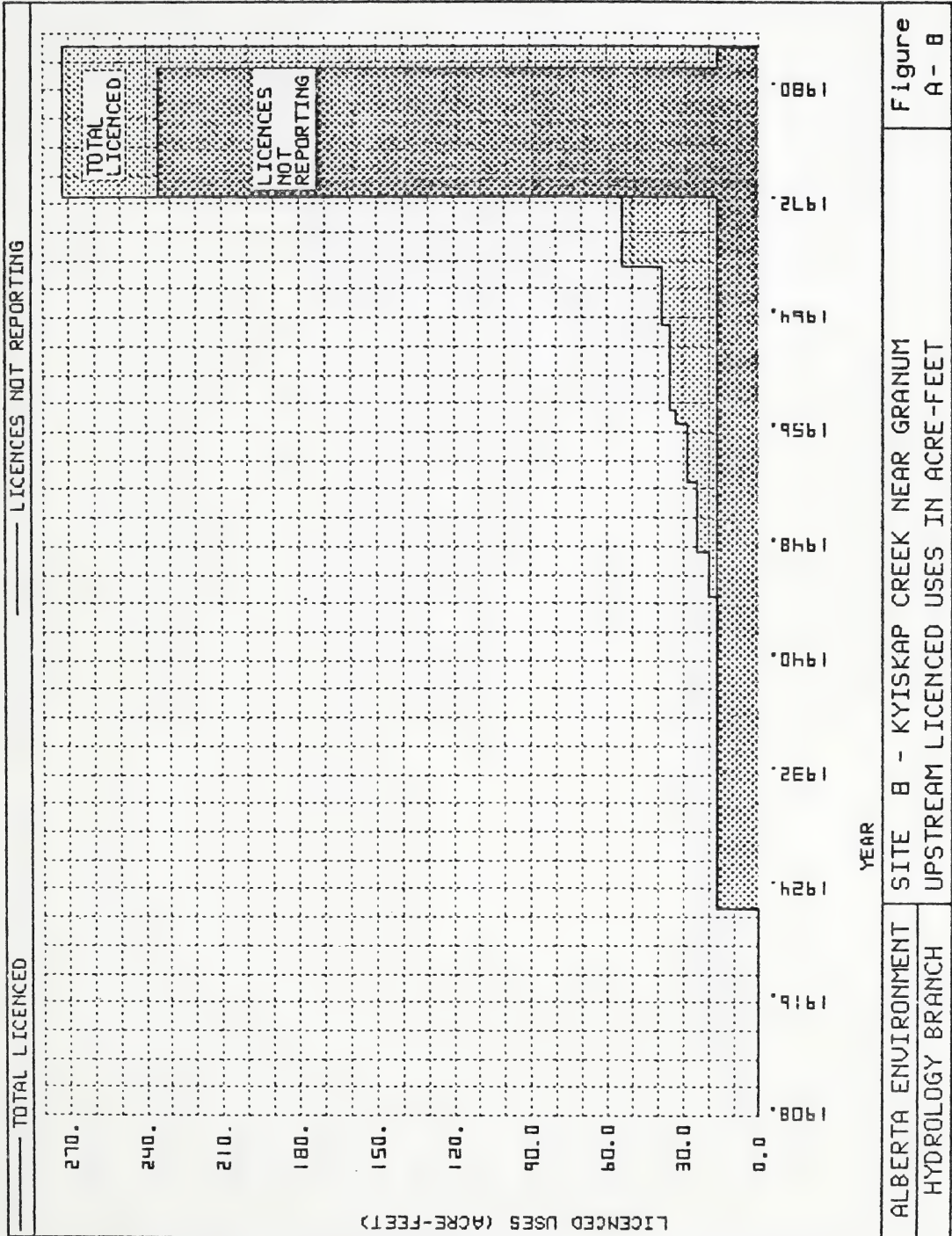


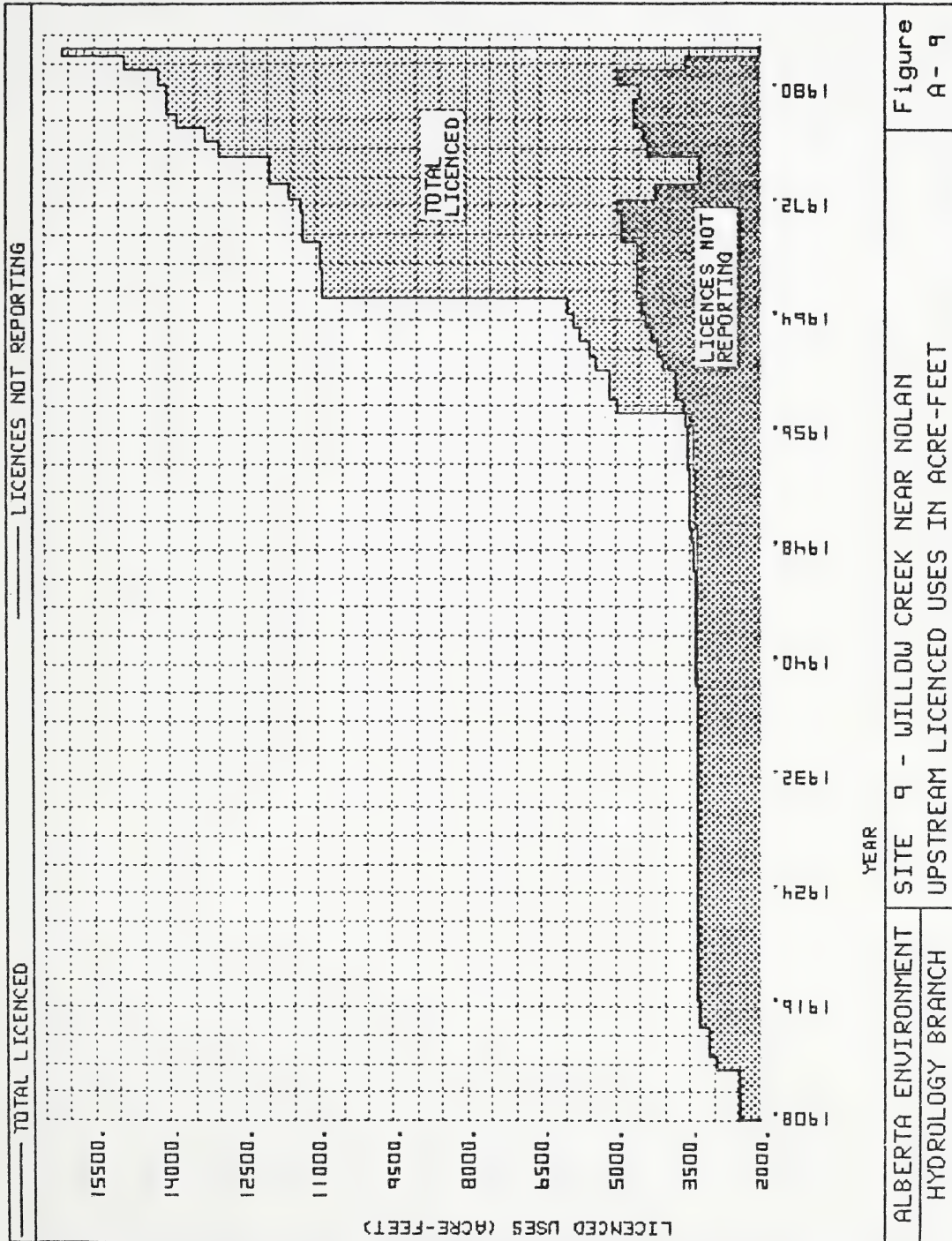


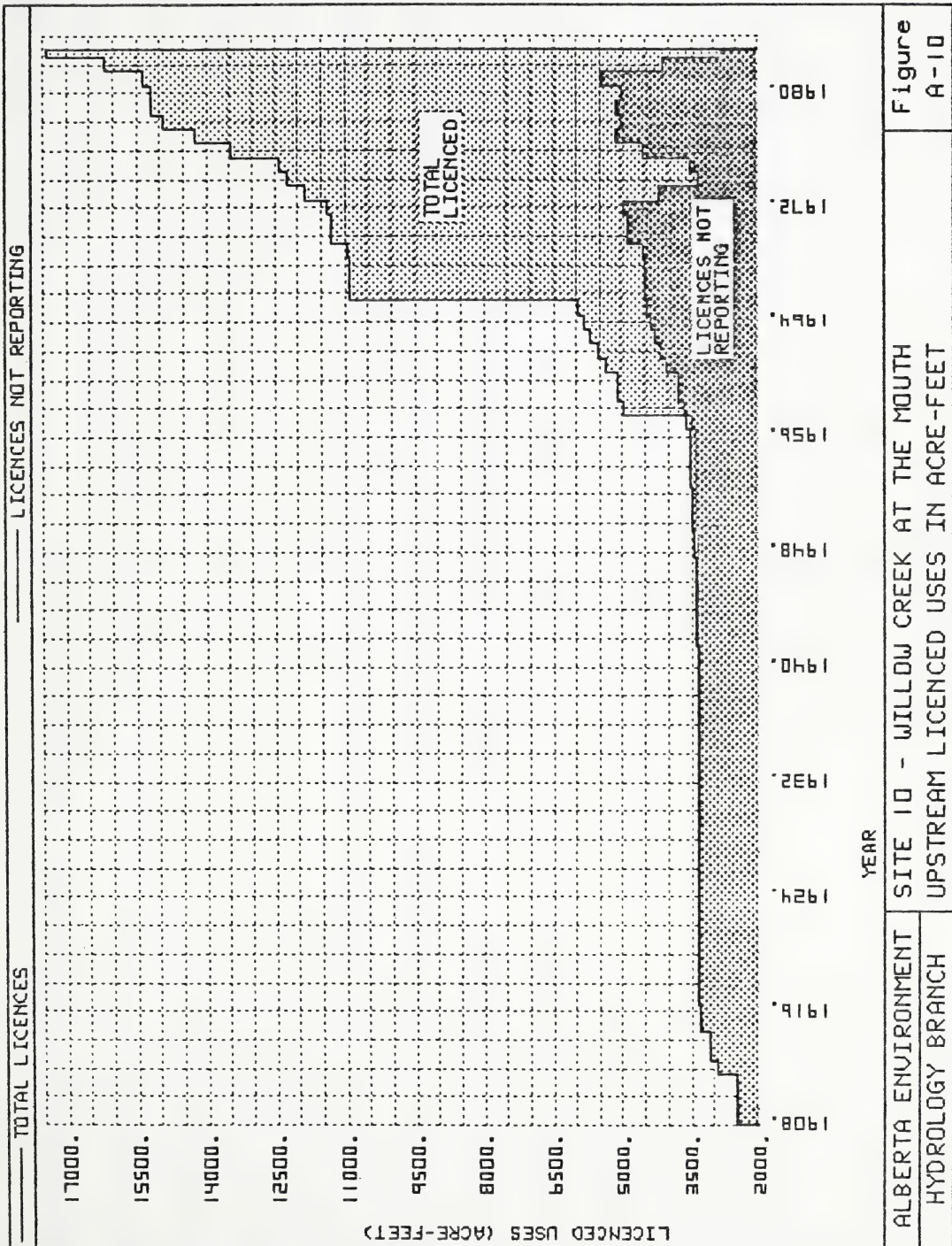












[illegible]

WILLOW CREEK BELOW LAKE CREEK - J5AB039
MONTHLY MEAN FLOW ADJUSTMENTS - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	AC FT
1912	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1913	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1914	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1915	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1916	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1917	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1918	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1919	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1920	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1921	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1922	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1924	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1925	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1927	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1928	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1929	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1931	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1932	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1933	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1934	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1935	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1936	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1937	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1938	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1940	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1941	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1942	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1943	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1944	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1945	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1946	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1947	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1948	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1949	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1950	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1951	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1952	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1953	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1954	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1955	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1956	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1957	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1958	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1959	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1960	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1961	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1962	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1963	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1964	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	73
1965	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1966	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	125
1967	-0.4	-0.5	2.6	14.5	184.3	-3.6	-7.3	-7.5	-13.9	-13.5	-10.1	-2.8	12	8379
1968	-6.7	-5.5	-1.6	-0.1	28.6	48.6	2.4	1.6	-0.1	-2.4	-12.5	-10.3	3	2387
1969	-7.2	-10.7	-4.2	46.3	1.1	-2.6	4.1	-12.9	-5.3	-7.9	-4.4	-5.8	-1	-626
1970	8.4	4.6	8.2	2.7	18.6	3.5	-13.5	-5.4	-8.1	-1.4	-17.9	-14.4	-1	-892
1971	-9.9	-6.4	34.9	28.2	11.3	-2.3	-1.5	-11.1	-6.2	-2.7	-6.4	-8.7	1	1073
1972	-11.2	-8.1	1.7	85.4	26.1	-14.2	-13.4	3.8	-3.6	-1.1	-0.9	0.1	4	2682
1973	1.2	2.6	2.4	3.1	4.4	-7.8	0.7	-0.9	1.9	-7.7	-12.1	-6.5	-2	-1195
1974	-8.7	-10.1	-9.3	44.8	26.6	-10.4	-7.8	1.2	1.7	-2.1	-5.2	-5.1	1	922
1975	-5.8	8.0	20.5	11.0	4.3	-3.2	-12.7	-0.1	0.3	1.5	-4.9	-4.4	1	838
1976	-5.1	-13.1	0.9	24.9	2.8	1.8	-1.1	3.5	-0.2	-0.3	-2.6	-1.1	1	644
1977	-3.3	-21.6	-12.6	2.5	10.0	0.1	-5.8	2.3	1.9	1.5	-4.7	-2.9	-3	-1866
1978	-7.0	-26.0	10.6	45.6	30.9	-9.1	0.0	-2.3	1.5	0.4	-2.2	-1.1	4	2617
1979	-3.3	-3.6	5.7	10.9	-1.1	5.1	-0.2	1.2	-0.5	-3.0	-8.1	-6.4	-0	-196
1980	-4.5	-4.4	-8.7	21.4	27.6	-9.6	-1.7	2.4	2.7	1.9	-2.6	-4.5	2	1187
1981	-5.9	-5.7	-3.9	-2.4	32.9	-5.8	-1.0	-1.2	-1.7	-0.7	-3.7	-11.5	-1	-529
1982	-7.9	-11.5	-11.4	7.7	12.2	36.5	-3.4	-3.5	1.0	-0.4	-5.8	-7.5	0	121
1983	-4.6	-8.0	3.0	5.2	31.0	-0.1	0.9	-8.6	-7.4	-1.2	-3.1	-2.3	0	353
MIN	-11.2	-26.0	-12.6	-2.4	-1.1	-58.2	-13.5	-12.9	-13.9	-13.5	-17.9	-14.4	-3	-1888
MAX	8.4	8.0	34.9	85.4	184.3	48.6	4.1	3.8	2.7	1.9	3.0	0.1	12	8379
MEAN	-1.2	-1.7	0.5	4.6	7.1	-0.4	-1.0	-0.5	-0.5	-0.8	-1.6	-1.4	0	-

WILLOW CREEK NEAR CLARESHOLM - J54B001
 MONTHLY MEAN FLOW ADJUSTMENTS - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	AC FT
1910	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1913	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1914	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1915	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1916	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1917	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1918	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1919	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1920	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1921	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1922	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1924	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1925	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1927	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1928	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1929	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1931	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1932	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1933	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1934	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1935	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1936	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1937	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1938	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1940	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1941	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1942	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1943	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1944	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1945	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1946	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1947	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1948	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1949	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1950	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1951	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1952	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1953	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1954	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1955	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1956	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1957	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1958	0.8	0.8	0.7	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	1	450
1959	0.4	0.4	0.4	0.4	0.5	0.7	0.8	0.7	0.8	0.4	0.8	0.4	1	359
1960	0.4	0.5	0.5	0.4	0.5	0.7	1.0	0.8	0.8	0.5	0.4	0.4	1	394
1961	0.4	0.4	0.4	0.4	0.6	1.2	0.9	0.7	0.5	0.5	0.4	0.4	1	411
1962	0.4	0.4	0.5	0.5	0.7	0.8	0.9	0.6	0.5	0.5	0.5	0.4	1	417
1963	0.5	0.5	0.5	0.7	0.9	0.8	0.7	0.9	0.7	0.8	0.8	0.5	1	471
1964	0.5	0.5	0.5	0.5	0.7	0.9	1.1	1.0	0.8	0.7	0.8	0.6	1	497
1965	0.6	0.6	0.6	0.6	0.8	0.8	1.0	1.0	0.7	0.7	0.8	0.6	1	508
1966	0.6	0.6	0.6	0.6	0.8	0.9	1.0	0.4	0.9	2.0	0.8	0.2	1	578
1967	0.1	0.1	0.1	0.1	185.0	-2.5	-6.2	-6.4	-12.9	-12.9	-6.5	-6.0	12	5892
1968	-6.1	-5.3	-7.1	0.5	25.5	49.6	3.5	2.7	0.7	-1.7	-11.9	-9.8	4	2922
1969	-6.5	-9.5	-3.5	47.4	2.6	-1.4	5.1	-11.8	-8.5	-7.1	-13.7	-9.0	-0	-152
1970	-9.1	-5.3	8.9	3.3	19.5	4.7	-12.2	-2.8	-11.2	-0.8	-11.3	-10.8	-0	-251
1971	-9.3	-5.7	35.6	22.8	12.4	-1.3	-0.0	-9.5	-11.2	-2.0	-11.7	-8.1	2	1701
1972	-10.5	-7.3	0.5	58.2	27.0	-13.1	-12.4	5.1	-10.7	-0.4	-10.0	0.6	5	3111
1973	-2.0	-3.3	3.2	3.6	5.5	-5.5	2.1	0.3	2.6	-8.5	-10.4	-5.8	-1	-824
1974	-2.0	-5.5	-5.5	45.8	27.5	-9.2	-5.4	2.2	2.5	-1.3	-8.1	-4.5	2	1545
1975	-5.0	8.8	21.4	11.8	5.2	-2.1	-11.3	1.0	1.0	2.3	-4.1	-3.7	2	1502
1976	-4.3	-12.2	1.7	25.8	3.8	3.0	0.1	4.4	0.9	0.8	-0.0	-0.4	2	1304
1977	-0.5	-21.0	-11.8	5.0	11.0	1.5	-3.9	4.2	3.1	2.8	-3.9	-0.1	-1	-897
1978	-6.3	-25.1	11.5	49.0	21.6	-7.5	1.3	-0.8	2.5	1.5	-11.4	-0.2	5	3909
1979	-2.3	-2.6	7.1	14.5	0.1	6.6	1.7	2.8	1.0	-1.8	-11.0	-5.3	1	658
1980	-4.0	-3.4	-7.8	22.9	29.2	-8.4	0.2	3.7	3.9	2.8	-10.0	-5.5	3	2041
1981	-4.9	-4.7	-3.0	-1.2	35.0	-4.5	0.3	0.6	-0.2	0.2	-0.5	-10.7	0	261
1982	-7.3	-10.8	-10.5	6.5	13.6	37.9	-1.9	-1.7	2.3	0.5	-6.0	-5.5	1	502
1983	-3.7	-7.2	3.8	6.2	32.2	2.1	3.2	-6.7	-6.1	-0.2	-0.2	-1.5	2	1256
MIN	-10.5	-25.1	-11.8	-1.2	0.0	-57.5	-12.4	-11.8	-12.9	-12.9	-17.3	-13.8	-1	-897
MAX	9.1	8.8	35.6	66.2	185.0	49.6	5.1	5.1	3.9	2.8	3.5	0.8	12	8892
MEAN	-1.0	-1.4	0.8	5.1	7.5	-0.0	-0.5	-0.1	-0.2	-0.2	-1.3	-1.2	1	442

WILLOW CREEK NEAR GRANUM - J54B015
MONTHLY MEAN FLOW ADJUSTMENTS - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	AC FT
1912	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1913	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1914	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1915	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1916	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1917	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1918	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1919	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1920	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1921	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1922	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1924	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1925	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1927	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1928	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1929	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1931	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1932	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1933	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1934	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1935	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1936	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1937	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1938	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1940	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1941	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.	0.
1942	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.	72.
1943	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.	72.
1944	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.	72.
1945	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.	72.
1946	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.	72.
1947	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.	72.
1948	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.	72.
1949	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.	72.
1950	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.	145.
1951	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.	145.
1952	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.	145.
1953	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.	145.
1954	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.	145.
1955	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.	145.
1956	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.	145.
1957	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.	145.
1958	0.6	0.8	0.7	0.6	0.8	0.8	0.7	0.8	0.5	0.5	0.5	0.4	1.	476.
1959	0.4	0.4	0.5	0.4	0.5	0.7	0.9	0.7	0.5	0.5	0.5	0.5	1.	393.
1960	0.5	0.5	0.5	0.5	0.5	0.7	1.1	0.7	0.6	0.5	0.4	0.4	1.	418.
1961	0.4	0.4	0.5	0.5	0.7	1.2	0.9	0.8	0.5	0.5	0.5	0.5	1.	447.
1962	0.5	0.5	0.6	0.6	0.7	0.8	1.0	0.9	0.5	0.6	0.5	0.5	1.	466.
1963	0.6	0.6	0.6	0.7	1.0	0.9	0.8	1.0	0.7	0.7	0.6	0.6	1.	532.
1964	0.6	0.6	0.6	0.6	0.8	0.9	1.2	1.1	0.6	0.7	0.7	0.7	1.	552.
1965	0.7	0.7	0.6	0.6	0.9	0.8	1.1	1.0	0.7	0.6	0.7	0.7	1.	562.
1966	0.7	0.7	0.7	4.7	55.6	-57.4	-7.1	0.5	1.0	2.3	3.6	-0.2	1.	651.
1967	0.2	0.2	3.2	15.2	185.0	-2.8	-6.1	-6.3	-12.8	-12.8	-5.5	-6.1	12.	8959.
1968	-8.0	-5.2	-1.0	0.5	25.6	45.7	3.6	2.8	0.2	-1.6	-11.8	-5.7	4.	2999.
1969	-6.4	-9.8	-3.4	47.5	2.7	-1.3	5.2	-11.7	-6.4	-7.0	-3.6	-5.1	-0.	-89.
1970	9.2	5.4	5.0	3.4	19.6	4.8	-12.1	-3.7	-7.1	-0.5	-17.2	-13.7	-0.	-179.
1971	-5.2	-5.6	35.7	28.9	12.5	-1.2	0.1	-5.4	-5.2	-1.9	-7.6	-8.0	2.	1793.
1972	-10.4	-7.2	2.6	66.3	27.1	-13.0	-12.3	5.2	-2.6	-0.3	-0.1	0.9	5.	3384.
1973	2.1	3.4	3.3	3.9	5.6	-6.4	0.2	0.4	2.5	-6.8	-12.3	-5.7	-1.	-452.
1974	-7.9	-9.4	-8.5	45.7	27.6	-9.1	-6.3	2.4	2.6	-1.2	-5.0	-4.4	2.	1618.
1975	-4.9	8.9	21.5	11.9	5.3	-2.0	-11.2	1.1	1.3	2.4	-4.0	-3.6	2.	1574.
1976	-4.2	-10.2	1.8	25.9	3.5	3.1	0.3	4.5	1.0	0.7	-1.9	-0.3	2.	1382.
1977	-2.5	-20.9	-11.7	6.4	12.1	2.6	-2.5	5.2	3.2	2.9	-3.8	-2.0	-1.	-553.
1978	-6.2	-24.8	11.6	49.1	32.1	-6.7	2.3	0.2	2.6	1.6	-1.3	-0.1	5.	3836.
1979	-2.2	-2.5	7.2	14.6	1.7	7.9	2.5	4.0	1.1	-1.7	-7.0	-5.2	2.	1261.
1980	-3.8	-3.3	-7.7	23.0	31.0	-7.0	1.5	5.0	4.0	2.9	-1.9	-3.5	3.	2448.
1981	-4.8	-4.6	-2.9	-1.1	36.1	-4.5	0.5	1.3	-0.1	0.3	-2.7	-10.6	1.	468.
1982	-7.2	-10.7	-10.5	8.6	17.1	40.6	1.6	3.1	5.2	0.6	-6.9	-6.5	3.	2003.
1983	-3.6	-7.1	4.0	6.5	35.7	6.8	8.4	-1.3	-3.9	0.1	-2.1	-1.4	4.	2640.
MIN	-10.4	-24.8	-11.7	-1.1	0.0	-57.4	-12.3	-11.7	-12.8	-12.8	-17.2	-13.7	-1.	-593.
MAX	9.2	8.9	35.7	66.3	185.0	48.7	8.4	5.2	5.2	2.9	3.6	0.9	12.	8959.
MEAN	-0.8	-1.4	0.8	5.1	7.7	0.2	-0.3	0.2	-0.1	-0.2	-1.3	-1.2	1.	-

WILLOW CREEK NEAR NOLAN - JSAB002
MONTHLY MEAN FLOW ADJUSTMENTS - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	MEAN	ADJ
1912	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1913	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1914	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1915	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1916	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1917	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1918	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1919	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1920	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1921	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1922	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1924	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1925	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1927	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1928	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1929	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1931	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1932	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1933	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1934	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1935	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1936	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1937	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1938	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1940	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1941	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1942	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1943	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1944	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1945	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1946	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1947	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1948	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1949	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1950	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1951	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1952	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1953	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1954	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1955	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1956	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1957	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1958	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	494
1959	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	405
1960	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	454
1961	0.5	0.5	0.5	0.5	0.5	0.7	1.2	1.0	0.8	0.6	0.6	0.5	1	477
1962	0.5	0.5	0.5	0.5	0.6	0.7	0.9	1.0	0.9	0.8	0.6	0.5	1	478
1963	0.5	0.5	0.5	0.5	0.8	1.0	0.9	0.8	1.0	0.7	0.7	0.5	1	536
1964	0.5	0.7	0.5	0.7	0.8	1.0	1.2	1.1	0.7	0.2	0.2	0.7	1	581
1965	0.7	0.7	0.7	0.7	0.5	0.5	0.5	1.1	1.1	0.6	0.6	0.7	1	586
1966	0.8	0.7	0.7	0.7	4.8	59.6	-57.3	-7.1	0.5	1.0	2.3	-0.2	1	675
1967	0.2	0.2	3.2	15.2	185.1	-2.7	-6.0	-6.2	-12.6	-12.7	-5.4	-5.1	12	8995
1968	-5.0	-5.2	-0.5	0.6	25.6	45.8	3.5	2.8	0.9	-11.7	-5.6	-4.3	4	3035
1969	-5.4	-9.7	-0.3	47.5	2.7	-1.2	5.3	-11.7	-8.4	-7.0	-3.6	-5.0	-0	-65
1970	9.2	5.5	5.0	3.5	15.6	4.8	-12.0	-3.7	-0.1	-0.5	-10.1	-13.6	-0	-145
1971	-9.1	-5.5	35.7	25.0	12.6	-1.1	0.1	-5.4	-5.2	-11.9	-7.5	-7.9	3	1835
1972	-10.4	-7.1	2.7	66.3	27.2	-12.9	-12.2	5.3	-0.5	-0.2	-0.1	1.0	5	3422
1973	-2.1	3.4	3.3	3.5	5.7	-5.4	2.2	0.4	3.0	-5.8	-10.2	-5.6	-1	-427
1974	-7.9	-9.3	-5.5	45.7	27.6	-9.0	-5.3	2.4	2.7	-1.1	-4.5	-4.3	2	1553
1975	-4.9	9.0	21.5	12.0	5.4	-2.0	-11.2	1.2	1.4	2.5	-4.0	-3.8	2	1510
1976	-4.2	-12.2	1.5	25.9	4.0	3.2	0.3	4.5	1.0	0.7	-1.5	-0.3	2	1400
1977	-2.4	-20.5	-11.7	6.4	12.1	2.7	-2.5	5.3	3.3	3.0	-3.5	-2.0	-1	-557
1978	-5.1	-24.8	11.7	45.2	33.2	-5.7	2.4	0.3	0.7	1.7	-1.3	-0.0	5	3821
1979	-2.1	-2.4	7.3	14.1	11.8	6.2	3.1	4.2	1.3	-1.5	-5.5	-5.1	2	1363
1980	-3.5	-3.2	-7.5	23.2	31.3	-5.8	1.8	5.2	4.2	3.1	-1.7	-3.3	4	2601
1981	-4.7	-4.4	-2.7	-0.9	36.3	-4.3	0.7	1.5	0.1	0.5	-2.5	-10.5	1	595
1982	-7.2	-10.6	-10.4	9.5	16.8	43.3	3.7	4.7	6.6	0.8	-5.7	-5.4	4	2574
1983	-3.5	-6.9	4.1	7.1	35.2	12.0	-12.2	0.2	-10.5	0.2	-12.0	-1.2	5	3628
MIN	-10.4	-24.8	-11.7	-0.9	0.0	-57.3	-12.2	-11.7	-12.8	-12.7	-17.1	-13.6	-1	-557
MAX	9.2	9.0	35.7	66.3	185.1	45.8	12.2	5.3	6.6	3.1	3.7	1.0	12	8995
MEAN	-0.8	-1.4	0.2	5.2	7.8	0.3	-0.2	0.2	-0.0	-0.1	-1.3	-1.1	1	-

[illegible]

[illegible]

9

9

WILLOW CREEK AT THE MOUTH - JAAA400
MONTHLY MEAN FLOW ADJUSTMENTS - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	EC FT
1912	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1913	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1914	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1915	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1916	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1917	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1918	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1919	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1920	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1921	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1922	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1924	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1925	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1926	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1927	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1928	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1929	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1930	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1931	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1932	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1933	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1934	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1935	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1936	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1937	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1938	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1940	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1941	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
1942	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1943	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1944	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1945	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1946	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1947	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1948	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1949	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	72
1950	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1951	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1952	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1953	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1954	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1955	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1956	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1957	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0	145
1958	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	494
1959	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	405
1960	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	454
1961	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	477
1962	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	478
1963	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1	536
1964	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1	581
1965	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1	586
1966	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1	675
1967	0.2	0.2	3.2	15.2	185.1	-2.7	-6.0	-6.2	-12.8	-12.7	-5.4	-8.1	12	8995
1968	-8.0	-5.2	-0.9	0.6	25.6	45.6	3.6	2.8	0.9	-1.6	-11.7	-9.6	4	3025
1969	-6.4	-5.7	-3.3	47.5	2.7	-1.2	5.2	-11.7	-8.4	-7.0	-3.6	-5.0	-0	-66
1970	9.2	5.5	9.0	3.5	19.6	4.8	-12.0	-3.7	-7.1	-0.5	-17.1	-13.6	-0	-149
1971	-9.1	-5.5	35.7	29.0	12.6	-1.1	0.1	-5.4	-5.2	-1.5	-7.5	-7.9	3	1835
1972	-10.4	-7.1	2.7	56.3	27.2	-12.9	-12.2	5.3	-2.6	-0.2	-0.1	1.0	5	3422
1973	2.1	3.4	3.2	3.5	5.7	-6.4	2.2	0.4	3.0	-6.8	-12.2	-5.6	-1	-427
1974	-7.9	-5.3	-8.5	45.7	27.6	-9.0	-6.3	2.4	2.7	-1.1	-4.9	-4.3	2	1653
1975	-4.9	9.0	21.5	12.0	5.4	-2.0	-11.2	1.2	1.4	2.5	-4.0	-3.6	2	1610
1976	-4.2	-12.2	1.8	25.9	4.0	3.2	0.3	4.5	1.0	0.7	-1.8	-0.3	2	1400
1977	-2.4	-20.5	-11.7	6.4	12.1	2.7	-0.8	5.3	3.3	3.0	-3.8	-2.0	-1	-557
1978	-6.1	-24.8	11.7	45.2	33.8	-5.9	3.6	2.1	3.6	1.7	-1.3	-0.0	6	4214
1979	-2.1	-2.4	7.3	14.7	3.1	5.6	5.7	8.1	3.3	-1.5	-6.9	-5.1	3	2057
1980	-3.6	-3.2	-7.5	23.2	32.4	-5.4	4.0	8.6	5.9	3.1	-1.7	-3.2	4	3197
1981	-4.7	-4.4	-2.7	-0.9	37.2	-3.1	2.6	4.3	1.6	0.5	-2.6	-10.5	2	1100
1982	-7.2	-10.6	-10.4	9.5	21.9	46.5	5.1	6.2	7.4	0.8	-6.7	-6.4	5	3281
1983	-3.5	-6.5	4.1	7.1	40.3	12.6	13.1	0.6	-2.2	0.2	-2.0	-1.2	5	3229
MIN	-10.4	-24.8	-11.7	-0.9	0.0	-57.3	-12.2	-11.7	-12.8	-12.7	-17.1	-13.6	-1	-557
MAX	9.2	9.0	35.7	65.3	185.1	49.8	13.1	8.8	7.4	3.1	3.7	1.0	12	8995
MEAN	-0.8	-1.3	0.8	4.9	7.5	0.4	-0.0	0.4	0.1	-0.1	-1.2	-1.0	1	-

A P P E N D I X B

Willow Creek Basin (A-Files)

Arrays of Recorded Streamflow

WILLOW CREEK ABOVE CHAIN LAKES - ASAB028
MONTHLY MEAN DISCHARGES - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC FT
1912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1919	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	234.	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	231.	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	145.	63.	15.	33.	24.	11.	7.	-	-	-
1966	4.	4.	13.	26.	75.	126.	44.	27.	11.	9.	8.	4.	29.	84	21216.
1967	3.	3.	5.	35.	278.	360.	27.	7.	2.	3.	4.	5.	51.	174	44088.
1968	5.	3.	8.	16.	44.	84.	26.	20.	40.	46.	20.	16.	27.	78	19782.
1969	9.	8.	10.	110.	143.	284.	234.	12.	6.	7.	6.	4.	70.	199	50395.
1970	0.	2.	4.	19.	128.	163.	39.	5.	5.	5.	5.	3.	33.	95	24116.
1971	3.	5.	4.	35.	85.	106.	13.	3.	4.	7.	7.	2.	23.	67	16528.
1972	2.	3.	20.	72.	189.	90.	31.	50.	35.	29.	18.	10.	46.	132	33440.
1973	5.	9.	17.	52.	151.	84.	14.	8.	8.	6.	4.	3.	30.	87	22063.
1974	2.	2.	7.	63.	241.	142.	19.	18.	15.	14.	8.	7.	45.	129	32555.
1975	2.	3.	4.	36.	229.	213.	83.	23.	10.	10.	5.	4.	52.	149	37714.
1976	4.	3.	10.	37.	78.	45.	16.	154.	20.	11.	7.	6.	33.	93	23653.
1977	4.	5.	6.	15.	16.	8.	3.	6.	11.	10.	5.	4.	8.	23	5741.
1978	3.	3.	12.	46.	150.	116.	65.	25.	18.	12.	11.	7.	39.	112	26339.
1979	5.	4.	17.	46.	151.	47.	11.	9.	5.	4.	3.	6.	26.	73	18526.
1980	4.	2.	3.	43.	65.	93.	11.	12.	18.	15.	14.	9.	24.	69	17386.
1981	9.	7.	12.	15.	320.	160.	49.	23.	6.	6.	5.	2.	52.	148	37311.
1982	0.	0.	0.	20.	30.	93.	21.	3.	4.	7.	5.	3.	16.	45	11273.
1983	2.	3.	8.	34.	62.	43.	14.	5.	1.	4.	3.	1.	15.	43	10790.
MIN	0.	0.	0.	15.	16.	8.	3.	3.	1.	3.	3.	1.	8.	-	5741.
MAX	9.	9.	20.	110.	320.	360.	234.	154.	40.	46.	20.	16.	70.	-	50395.
MEAN	4.	4.	9.	40.	135.	128.	41.	22.	13.	12.	8.	5.	35.	100	25298.

WILLOW CREEK BELOW LANE CREEK - ASAB039
 MONTHLY MEAN DISCHARGES - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1919	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	19.	10.	15.	15.	16.	-	-	-	-	-
1978	-	-	79.	66.	294.	313.	153.	64.	50.	25.	-	-	-	-	-
1979	-	-	57.	162.	397.	145.	41.	33.	15.	13.	-	-	-	-	-
1980	-	-	29.	90.	103.	199.	22.	23.	32.	32.	-	-	-	-	-
1981	-	-	37.	36.	623.	422.	139.	68.	25.	24.	-	-	-	-	-
1982	-	-	26.	98.	41.	152.	66.	17.	19.	20.	-	-	-	-	-
1983	-	-	37.	58.	61.	70.	32.	14.	5.	13.	-	-	-	-	-
MIN	-	-	26.	36.	41.	19.	10.	14.	5.	13.	-	-	-	-	-
MAX	-	-	79.	162.	623.	422.	153.	68.	50.	32.	-	-	-	-	-
MEAN	-	-	44.	85.	253.	189.	68.	33.	23.	20.	-	-	-	100	-

WILLOW CREEK NEAR CLARESHOLM - ASAB021
MONTHLY MEAN DISCHARGES - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC FT.
1912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1919	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	2.	2.	9.	81.	46.	52.	25.	8.	5.	9.	8.	3.	21.	18	15090.
1945	1.	1.	20.	37.	284.	522.	151.	27.	33.	41.	21.	31.	57.	84	70573.
1946	13.	15.	51.	72.	115.	346.	79.	27.	66.	54.	32.	21.	74.	64	53696.
1947	17.	46.	125.	312.	358.	330.	94	74.	149.	116.	71.	54.	146.	125	105398.
1948	37.	29.	138.	481.	1276.	885.	299.	135.	57.	44.	28.	9.	285.	245	207113.
1949	5.	3.	19.	131.	132.	120.	36.	4.	5.	14.	19.	8.	41.	36	29906.
1950	2.	14.	41.	121.	190.	136.	35	19.	5.	13.	8.	8.	49.	43	35804.
1951	6.	5.	277.	224.	551.	1115.	471.	223.	463.	307.	134.	82.	323.	278	233596.
1952	15.	60.	166.	481.	310.	324.	190.	127.	63	42	25	17.	153.	131	110917.
1953	11.	20.	115.	235.	744.	2193.	396.	119.	67.	45.	39.	26.	333.	286	241254.
1954	23.	36.	27.	185.	482.	323.	84.	82.	95.	127.	72.	34.	131.	113	94952.
1955	13.	21.	24	400.	846.	466.	399.	77.	46.	43.	18	23.	199.	171	143770.
1956	19.	12.	97.	140.	250.	110.	199.	40	30.	24	25	13.	80.	69	58261.
1957	5.	16.	56.	185.	305.	207.	42	21.	20.	35.	31.	17.	76.	68	57050.
1958	10.	11.	52	371.	396.	262.	356	110.	45.	25.	24	21.	141.	121	102039.
1959	14.	10.	146.	173.	338.	261.	75.	34.	38.	32	39	27.	96	85	71920.
1960	21.	35.	202.	104.	303.	138.	25	18.	6.	10.	8.	7.	73.	63	53259.
1961	9.	9.	20.	44.	170.	66.	14.	15.	10.	46.	30.	15.	38.	32	27157.
1962	31.	49.	159.	337.	136.	90.	25	8.	10.	10.	9.	6.	72.	62	52346.
1963	6.	14.	15.	28.	67.	486.	507.	44.	24.	18.	13.	10.	104.	89	75053.
1964	4.	4.	5.	80.	487.	295.	85.	21.	32.	24.	17.	8.	89.	76	64450.
1965	5.	52.	16.	240.	132.	345.	265.	62.	94.	63.	33.	24.	111.	95	80040.
1966	10.	12.	97.	95.	129.	450.	106	58.	23.	27.	20	11.	50.	77	64961.
1967	5.	9	121.	101.	657.	1082.	185.	58.	28.	25	27	15.	193.	165	139505.
1968	18.	15.	42.	36.	55.	113.	62.	45.	98.	152.	71.	45.	63.	54	45680.
1969	31.	30.	128.	488.	421.	685.	865.	104.	50.	48	41.	21.	244.	205	176428.
1970	12.	23.	47.	119.	290.	391.	122.	24.	25.	30.	24.	24.	94.	81	68232.
1971	64.	119.	45.	180.	147.	243.	40.	13.	17.	24.	22.	10.	76.	65	55167.
1972	13.	16.	232.	255.	574.	297.	94.	125.	84.	71.	59.	27.	155.	133	112388.
1973	35.	44.	72.	172.	403.	263.	57.	25.	22.	31.	28	23.	99.	85	71512.
1974	21.	26.	120.	167.	748.	439.	90.	55.	43.	41.	31	27.	152.	131	110004.
1975	21.	17.	30.	271.	624.	591.	260.	89.	40.	36	25.	21.	169.	146	122614.
1976	41.	27.	114.	112.	175.	94.	28.	308.	46.	30.	18	20.	85.	73	61585.
1977	28.	29.	38.	67.	30.	16.	6.	12.	12.	14.	6	7.	22.	19	15834.
1978	9.	13.	114.	78.	422.	369.	197.	75.	66.	35.	34.	17.	120.	103	86933.
1979	7.	19.	90.	214.	501.	175.	36.	34.	15.	18.	12.	13.	96.	82	65215.
1980	8.	16.	35.	112.	103.	203.	20.	20.	26.	27.	23.	29.	52.	44	37412.
1981	21.	28.	38.	36.	654.	516.	175.	85.	22.	22.	16	10.	136.	117	58476.
1982	1.	6.	21.	103.	54.	164.	74.	12.	14.	16.	24.	19.	42.	36	30641.
1983	20.	24.	37.	63.	65.	67.	22.	7.	3.	8.	15.	14.	29.	25	20922.
MIN	1.	1.	5.	28.	30.	16.	6.	4.	3.	8.	6.	3.	21.		15090.
MAX	64.	119.	277.	491.	1276.	2193.	866.	308.	463.	307.	134.	82.	333.		241354.
MEAN	16.	23.	80.	179.	349.	382.	157.	61.	50.	45.	30.	20.	116.	100	84302.

WILLOW CREEK NEAR GRANUM - ASABOIS
MONTHLY MEAN DISCHARGES - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1919	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	297.	576.	203.	167.	48.	39.	-	-	-	-	-
1925	-	-	104.	338.	223.	375.	73.	36.	42.	172.	-	-	-	-	-
1926	-	-	44.	157.	84.	425.	318.	87.	524.	353.	-	-	-	-	-
1927	-	-	115.	199.	1135.	1635.	425.	322.	684.	595.	-	-	-	-	-
1928	-	-	375.	450.	435.	933.	1069.	325.	164.	130.	-	-	-	-	-
1929	-	-	95.	253.	705.	1229.	165.	57.	44.	48.	-	-	-	-	-
1930	-	181.	104.	299.	268.	246.	98.	24.	26.	31.	-	-	-	-	-
1931	-	-	46.	72.	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	342.	133.	119.	50.	11.	2.	12.	-	-	-	-	-
1936	-	-	143.	283.	52.	47.	4.	0.	0.	0.	-	-	-	-	-
1937	-	-	12.	85.	80.	314.	47.	21.	10.	25.	-	-	-	-	-
1938	-	-	65.	230.	535.	257.	146.	32.	9.	17.	-	-	-	-	-
1939	-	-	107.	77.	50.	564.	125.	20.	12.	38.	-	-	-	-	-
1940	-	-	54.	157.	215.	94.	40.	15.	64.	64.	-	-	-	-	-
1941	-	-	39.	51.	51.	105.	32.	15.	58.	58.	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1978	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MIN	-	181.	12.	51.	50.	47.	4.	0.	0.	0.	-	-	-	-	-
MAX	-	181.	375.	450.	1139.	1635.	1069.	325.	684.	595.	-	-	-	-	-
MEAN	-	181.	100.	214.	305.	495.	200.	81.	121.	113.	-	-	-	100	-

WILLOW CREEK NEAR NOLAN - ASAB002
MONTHLY MEAN DISCHARGES - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	Z	AC. FT.
1912	-	-	-	-	305.	382.	493.	285.	137.	121.	-	-	-	-	-
1913	-	-	-	-	357.	318.	300.	187.	92.	86.	-	-	-	-	-
1914	-	-	-	182.	156.	151.	91.	31.	22.	125.	-	-	-	-	-
1915	-	-	-	130.	995.	1609.	1226.	543.	288.	188.	140.	106.	-	-	-
1916	18.	88	165.	222.	321.	1248.	588.	174.	231.	248	195.	107.	298.	185	216397.
1917	39.	29	72.	422.	1364.	1864.	391.	159.	100.	83.	97.	24	387.	240	280426.
1918	20.	31	89	100	150	114.	30.	23	37.	35.	17.	6.	54.	34	35351.
1919	9.	9.	9.	112.	132.	47.	4.	10.	8.	17.	37.	13.	34.	21	24572.
1920	12	15	108.	302.	1218.	566.	202.	45	22.	26	26	11.	214.	133	155072.
1921	2.	16	63.	172.	161.	109.	37.	11.	10.	20.	13.	9.	52.	32	37742.
1922	0.	0.	8.	227.	382.	165.	83.	22.	8.	12.	10.	3.	77.	48	55718.
1923	2	1.	18.	94.	130.	2243.	658.	273.	110.	71.	-	-	-	-	-
1924	-	-	79.	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	36.	155.	1413.	1618.	720.	326.	237.	192.	-	-	-	-	-
1943	-	-	196.	517.	275.	259.	97.	24.	13.	21.	-	-	-	-	-
1944	-	-	13.	116.	50.	45.	23.	15.	11.	5.	-	-	-	-	-
1945	-	-	18.	33.	271.	603.	182.	27.	34.	37.	-	-	-	-	-
1946	-	-	93.	77.	121.	432.	90.	26.	101.	110.	-	-	-	-	-
1947	-	-	175.	399.	515.	444.	127.	72.	132.	177.	-	-	-	-	-
1948	-	-	206.	746.	1971.	1537.	500.	240.	80.	78.	-	-	-	-	-
1949	-	-	31.	214.	179.	158.	46.	8.	10.	26.	-	-	-	-	-
1950	-	-	83.	160.	221.	159.	55.	23.	7.	11.	-	-	-	-	-
1951	-	-	401.	303.	666.	1480.	704.	290.	730.	513.	-	-	-	-	-
1952	-	-	184.	750.	421.	442.	265.	166.	78.	58.	-	-	-	-	-
1953	-	-	178.	270.	1003.	3117.	625.	214.	106.	66.	-	-	-	-	-
1954	-	-	71.	284.	545.	476.	127.	130.	129.	156.	-	-	-	-	-
1955	-	-	66.	531.	1221.	724.	532.	109.	64.	60.	-	-	-	-	-
1956	-	-	190.	164.	241.	117.	251.	56.	35.	28.	-	-	-	-	-
1957	-	-	117.	225.	351.	236.	74.	29.	26.	46.	-	-	-	-	-
1958	-	-	90.	558.	508.	306.	467.	167.	63.	40.	-	-	-	-	-
1959	-	-	198.	210.	453.	420.	130.	47.	50.	45.	-	-	-	-	-
1960	-	-	237.	143.	399.	214.	46.	21.	7.	14.	-	-	-	-	-
1961	-	-	34.	50.	181.	82.	15.	24.	12.	52.	-	-	-	-	-
1962	-	-	203.	441.	156.	111.	27.	9.	11.	11.	11.	7.	-	-	-
1963	5.	29.	23.	26.	65.	582.	717.	61.	26.	18.	21.	21.	133.	83	96621.
1964	13.	8.	16.	90.	588.	330.	101.	28.	35.	28.	20.	13.	106.	66	77118.
1965	8.	60.	71.	343.	155.	387.	363.	105.	122.	93.	53.	37.	150.	93	108297.
1966	10.	13.	107.	124.	152.	613.	159.	100.	37.	35.	29.	17.	116.	72	64165.
1967	9.	8.	130.	271.	945.	1751.	366.	81.	43.	45.	52.	22.	311.	193	224976.
1968	52.	43.	103.	81.	85.	134.	63.	57.	128.	183.	-	-	-	-	-
1969	-	-	247.	720.	532.	856.	1189.	138.	68.	72.	-	-	-	-	-
1970	-	-	59.	156.	275.	440.	154.	36.	28.	40.	-	-	-	-	-
1971	-	-	66.	222.	137.	251.	46.	20.	19.	30.	-	-	-	-	-
1972	-	-	410.	346.	591.	430.	148.	144.	112.	94.	-	-	-	-	-
1973	-	-	117.	175.	423.	318.	78.	36.	37.	39.	-	-	-	-	-
1974	-	-	154.	208.	846.	560.	118.	78.	57.	54.	-	-	-	-	-
1975	-	-	35.	325.	768.	819.	365.	125.	63.	57.	-	-	-	-	-
1976	-	-	142.	139.	177.	108.	27.	361.	66.	49.	-	-	-	-	-
1977	-	-	56.	86.	33.	15.	7.	13.	13.	14.	-	-	-	-	-
1978	-	-	263.	135.	407.	548.	221.	105.	142.	59.	-	-	-	-	-
1979	-	-	164.	259.	619.	236.	49.	32.	21.	22.	-	-	-	-	-
1980	-	-	63.	136.	111.	273.	18.	24.	33.	36.	-	-	-	-	-
1981	-	-	61.	43.	757.	603.	210.	104.	34.	31.	-	-	-	-	-
1982	-	-	30.	138.	60.	182.	95.	6.	12.	20.	-	-	-	-	-
1983	-	-	56.	71.	72.	65.	19.	4.	4.	8.	-	-	-	-	-
MIN	0.	0.	8.	28.	33.	15.	4.	4.	4.	5.	10.	3.	34.		24572.
MAX	52.	68.	410.	750.	1971.	3117.	1226.	543.	730.	513.	195.	107.	387.		280426.
MEAN	14.	24.	114.	232.	459.	580.	255.	100.	76.	71.	51.	28.	161.	100	116704.

6 TROUT CREEK NEAR GRANUM - ASABOOS
MONTHLY MEAN DISCHARGES - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC FT.
1912	-	-	-	43.	61.	66.	59.	44.	26.	21.	-	-	-	-	-
1913	-	-	-	-	97.	82.	82.	35.	18.	17.	-	-	-	-	-
1914	-	-	-	34.	19.	17.	16.	10.	8.	11.	-	-	-	-	-
1915	-	-	-	26.	206.	312.	250.	98.	45.	32.	-	-	-	-	-
1916	-	-	-	-	92.	335.	110.	50.	57.	43.	-	-	-	-	-
1917	-	-	-	23.	309.	399.	106.	40.	26.	17.	-	-	-	-	-
1918	-	-	-	19.	14.	17.	11.	6.	7.	12.	-	-	-	-	-
1919	-	-	3.	14.	17.	5.	3.	3.	3.	3.	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	4.	43.	71.	41.	26.	6.	4.	5.	-	-	-	-	-
1923	-	-	8.	15.	32.	522.	179.	62.	31.	19.	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	2.	0.	1.	1.	2.	-	-	-	-	-
1978	-	-	38.	17.	66.	122.	39.	19.	15.	10.	-	-	-	-	-
1979	-	-	19.	31.	96.	53.	18.	9.	5.	4.	-	-	-	-	-
1980	-	-	10.	17.	8.	18.	4.	3.	2.	4.	-	-	-	-	-
1981	-	-	5.	4.	94.	109.	47.	31.	11.	9.	-	-	-	-	-
1982	-	-	7.	19.	7.	22.	17.	5.	3.	4.	-	-	-	-	-
1983	-	-	8.	8.	6.	8.	5.	0.	0.	0.	-	-	-	-	-
MIN	-	-	3.	4.	6.	2.	0.	0.	0.	0.	-	-	-	-	-
MAX	-	-	38.	43.	309.	522.	250.	88.	57.	43.	-	-	-	-	-
MEAN	-	-	11.	22.	73.	126.	88.	25.	16.	13.	-	-	-	100	-

MEADOW CREEK AT HART'S RANCH - ASAB006
MONTHLY MEAN DISCHARGES - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	13.	7	8	10.	5	4.	3.	-	-	-	-	-
1913	-	-	-	-	6.	9	4.	2.	1.	2.	-	-	-	-	-
1914	-	-	-	7.	2	1.	0.	0.	0.	4.	-	-	-	-	-
1915	-	-	-	7.	10.	35	33.	21.	9.	8.	-	-	-	-	-
1916	-	-	27.	8.	10.	28.	15.	7.	8.	7.	-	-	-	-	-
1917	-	-	-	8.	54.	74.	20.	9.	6.	5.	-	-	-	-	-
1918	-	-	-	4.	1.	1.	0.	0.	0	0.	-	-	-	-	-
1919	-	-	2.	4.	1.	0.	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	2.	8.	8.	2.	3.	0.	0.	0.	-	-	-	-	-
1923	-	-	2.	6.	10.	137.	23.	6.	2.	2.	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1978	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MIN	-	-	2.	4.	1.	0.	0.	0.	0.	0.	-	-	-	-	-
MAX	-	-	27.	13.	54.	137.	33.	21.	9.	8.	-	-	-	-	-
MEAN	-	-	8.	7.	12.	29.	12.	6.	3.	3.	-	-	-	100	-

MEADOW CREEK NEAR THE MOUTH - ASAB029
MONTHLY MEAN DISCHARGES - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1919	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	2.	3.	10.	4.	3.	1.	1.	-	-	-	-	-
1967	-	-	9.	8.	74.	60.	8.	4.	2.	3.	-	-	-	-	-
1968	-	-	2.	4.	3.	4.	1.	0.	1.	2.	-	-	-	-	-
1969	-	-	32.	28.	13.	14.	17.	4.	2.	3.	-	-	-	-	-
1970	-	-	2.	4.	4.	3.	1.	0.	0.	0.	-	-	-	-	-
1971	-	-	3.	8.	3.	4.	0.	0.	0.	0.	-	-	-	-	-
1972	-	-	21.	16.	21.	12.	4.	2.	1.	3.	-	-	-	-	-
1973	-	-	2.	3.	4.	4.	0.	0.	0.	0.	-	-	-	-	-
1974	-	-	5.	8.	11.	10.	3.	4.	1.	1.	-	-	-	-	-
1975	-	-	0.	12.	19.	20.	12.	4.	2.	2.	-	-	-	-	-
1976	-	-	7.	5.	2.	2.	0.	6.	2.	1.	-	-	-	-	-
1977	-	-	0.	3.	1.	0.	0.	0.	0.	0.	-	-	-	-	-
1978	-	-	23.	6.	12.	15.	7.	2.	4.	2.	-	-	-	-	-
1979	-	-	5.	9.	17.	8.	2.	1.	0.	0.	-	-	-	-	-
1980	-	-	2.	3.	1.	1.	0.	0.	0.	0.	-	-	-	-	-
1981	-	-	1.	0.	9.	9.	5.	2.	1.	2.	-	-	-	-	-
1982	-	-	2.	5.	1.	1.	0.	0.	0.	0.	-	-	-	-	-
1983	-	-	1.	1.	0.	0.	0.	0.	0.	0.	-	-	-	-	-
MIN	-	-	0.	0.	0.	0.	0.	0.	0.	0.	-	-	-	-	-
MAX	-	-	32.	28.	74.	60.	17.	8.	4.	3.	-	-	-	-	-
MEAN	-	-	7.	7.	11.	10.	4.	2.	1.	1.	-	-	-	100	-

KYISKAP CREEK NEAR GRANUM - ASAB038
MONTHLY MEAN DISCHARGES - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1919	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	0.	0.	0.	0.	0.	-	-	-	-	-
1978	-	-	65.	9.	8.	6.	4.	1.	4.	0.	-	-	-	-	-
1979	-	-	6.	9.	11.	3.	1.	0.	0.	0.	-	-	-	-	-
1980	-	-	4.	3.	3.	1.	0.	0.	0.	0.	-	-	-	-	-
1981	-	-	0.	0.	17.	7.	2.	0.	0.	0.	-	-	-	-	-
1982	-	-	1.	3.	0.	3.	0.	0.	0.	0.	-	-	-	-	-
1983	-	-	0.	0.	0.	0.	0.	0.	0.	0.	-	-	-	-	-
MIN	-	-	0.	0.	0.	0.	0.	0.	0.	0.	-	-	-	-	-
MAX	-	-	65.	9.	17.	7.	4.	1.	4.	0.	-	-	-	-	-
MEAN	-	-	13.	4.	6.	3.	1.	0.	1.	0.	-	-	-	100	-

A P P E N D I X C

Willow Creek Basin (B-Files)

Arrays of Recorded Flows Adjusted to Natural

WILLOW CREEK ABOVE CHAIN LAKES - 35AB028
RECORDED MONTHLY MEAN FLOW ADJUSTED TO NATURAL FLOW - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1919	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	145.	63.	15.	33.	24.	11.	7.	-	-	-
1966	4.	4.	13.	26.	75.	125.	44.	27.	11.	5.	6.	4.	25.	84	21216.
1967	3.	3.	5.	33.	276.	360.	27.	7.	2.	3.	4.	5.	51.	174	44088.
1968	5.	3.	8.	16.	44.	84.	25.	20.	40.	46.	20.	15.	27.	78	15782.
1969	9.	8.	10.	110.	142.	284.	234.	12.	6.	7.	6.	4.	70.	199	50395.
1970	0.	2.	4.	19.	128.	183.	39.	5.	5.	5.	5.	3.	33.	55	24118.
1971	3.	5.	4.	39.	85.	106.	13.	3.	4.	7.	7.	2.	23.	67	16528.
1972	2.	3.	20.	73.	169.	90.	31.	50.	25.	25.	18.	10.	45.	122	33440.
1973	9.	5.	17.	52.	151.	84.	14.	8.	6.	6.	4.	3.	30.	87	22063.
1974	2.	2.	7.	63.	241.	142.	19.	18.	15.	14.	8.	7.	45.	129	32569.
1975	2.	3.	4.	36.	229.	213.	83.	23.	10.	10.	5.	4.	52.	149	37714.
1976	4.	3.	10.	37.	78.	45.	16.	154.	20.	11.	7.	6.	33.	93	23693.
1977	4.	5.	6.	15.	15.	8.	3.	2.	11.	10.	5.	4.	8.	23	5741.
1978	3.	3.	12.	46.	150.	116.	65.	25.	18.	12.	11.	7.	39.	112	28339.
1979	5.	4.	17.	46.	151.	47.	11.	9.	5.	4.	3.	6.	26.	73	18528.
1980	4.	2.	3.	43.	65.	93.	11.	12.	18.	15.	14.	9.	24.	59	17386.
1981	9.	7.	12.	16.	320.	160.	49.	23.	6.	6.	5.	2.	52.	148	37311.
1982	0.	0.	0.	20.	30.	92.	21.	3.	4.	7.	5.	3.	15.	45	11273.
1983	2.	3.	8.	34.	62.	43.	14.	5.	1.	4.	3.	1.	15.	43	10790.
MIN	0.	0.	0.	15.	16.	8.	3.	3.	1.	3.	3.	1.	8.		5741.
MAX	9.	9.	20.	110.	320.	360.	234.	154.	40.	46.	20.	16.	70.		50395.
MEAN	4.	4.	9.	40.	136.	127.	41.	22.	13.	12.	8.	5.	35.	100	25298.

WILLOW CREEK BELOW LANE CREEK - B5AB039
RECORDED MONTHLY MEAN FLOW ADJUSTED TO NATURAL FLOW - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1919	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	19.	5.	17.	17.	18.	-	-	-	-	-
1978	-	-	89.	111.	325.	304.	153.	61.	52.	26.	-	-	-	-	-
1979	-	-	62.	173.	396.	150.	40.	34.	15.	10.	-	-	-	-	-
1980	-	-	20.	111.	131.	189.	20.	25.	34.	34.	-	-	-	-	-
1981	-	-	33.	33.	657.	416.	138.	67.	23.	23.	-	-	-	-	-
1982	-	-	15.	106.	54.	189.	83.	14.	20.	20.	-	-	-	-	-
1983	-	-	40.	63.	92.	70.	33.	6.	0.	11.	-	-	-	-	-
MIN	-	-	15.	33.	64.	19.	5.	8.	0.	10.	-	-	-	-	-
MAX	-	-	89.	173.	657.	416.	153.	67.	52.	34.	-	-	-	-	-
MEAN	-	-	43.	100.	276.	191.	66.	32.	23.	20.	-	-	-	100	-

WILLOW CREEK NEAR CLARESHOLM - 55AB021
RECORDED MONTHLY MEAN FLOW ADJUSTED TO NATURAL FLOW - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1919	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	2.	2.	9.	81.	46.	52.	25.	8.	5.	9.	8.	3.	21.	18	15074.
1945	1.	1.	20.	37.	284.	522.	151.	27.	33.	41.	21.	31.	98.	83	70657.
1946	13.	15.	51.	72.	115.	348.	79.	27.	66.	54.	32.	21.	74.	63	53792.
1947	17.	46.	125.	312.	358.	330.	94.	74.	149.	116.	71.	54.	146.	124	105374.
1948	37.	29.	138.	481.	1276.	885.	299.	135.	57.	44.	28.	9.	285.	243	207172.
1949	5.	3.	19.	131.	132.	120.	36.	4.	5.	14.	19.	8.	41.	35	29535.
1950	2.	14.	41.	121.	190.	136.	35.	19.	5.	13.	8.	8.	49.	42	35782.
1951	6.	5.	277.	224.	561.	1115.	471.	223.	463.	307.	134.	82.	323.	275	233564.
1952	19.	60.	166.	491.	310.	324.	190.	127.	62.	42.	29.	17.	153.	130	110577.
1953	11.	20.	115.	235.	744.	2193.	396.	119.	67.	45.	35.	26.	333.	264	241420.
1954	23.	36.	27.	186.	482.	323.	84.	82.	95.	127.	72.	34.	131.	112	95042.
1955	13.	21.	24.	400.	840.	466.	399.	77.	46.	43.	16.	23.	195.	165	143756.
1956	19.	12.	97.	140.	250.	110.	199.	40.	30.	24.	25.	13.	80.	69	58314.
1957	5.	17.	56.	185.	309.	207.	42.	22.	20.	35.	3.	17.	75.	67	57187.
1958	11.	12.	53.	372.	397.	263.	357.	111.	46.	26.	24.	22.	142.	121	102690.
1959	14.	10.	146.	173.	329.	252.	75.	34.	38.	34.	39.	26.	100.	85	72218.
1960	21.	36.	203.	104.	304.	135.	26.	19.	6.	10.	9.	8.	74.	63	53762.
1961	9.	10.	21.	44.	171.	67.	15.	16.	11.	46.	30.	15.	36.	32	27616.
1962	31.	50.	160.	338.	137.	91.	26.	9.	11.	11.	10.	7.	73.	62	52980.
1963	6.	14.	15.	28.	68.	497.	508.	45.	24.	18.	13.	11.	104.	89	75477.
1964	5.	5.	5.	80.	488.	296.	86.	22.	33.	24.	16.	8.	89.	76	64925.
1965	5.	52.	16.	241.	133.	346.	266.	63.	95.	64.	23.	25.	111.	95	80604.
1966	11.	12.	96.	100.	189.	433.	95.	58.	24.	29.	24.	11.	91.	77	65575.
1967	5.	9.	124.	116.	242.	1079.	179.	51.	15.	16.	16.	7.	206.	175	148632.
1968	10.	10.	41.	38.	85.	163.	66.	48.	99.	150.	59.	35.	67.	57	46584.
1969	24.	20.	125.	535.	424.	685.	871.	52.	42.	41.	37.	15.	244.	207	176295.
1970	21.	28.	56.	122.	310.	356.	110.	21.	18.	29.	7.	10.	94.	60	68114.
1971	55.	113.	81.	209.	159.	242.	40.	4.	11.	22.	14.	2.	79.	67	56920.
1972	3.	11.	235.	325.	601.	284.	81.	130.	81.	70.	56.	25.	155.	135	115730.
1973	41.	48.	75.	176.	409.	257.	59.	25.	25.	24.	16.	17.	98.	84	71084.
1974	13.	15.	111.	213.	776.	430.	84.	61.	46.	40.	25.	23.	154.	131	111729.
1975	16.	26.	52.	283.	629.	589.	249.	90.	41.	38.	27.	18.	172.	146	124165.
1976	37.	14.	116.	138.	179.	97.	26.	312.	47.	30.	16.	20.	87.	74	62532.
1977	24.	8.	27.	73.	41.	17.	2.	16.	15.	17.	2.	5.	21.	18	14928.
1978	3.	0.	126.	127.	454.	351.	196.	78.	56.	36.	30.	17.	125.	105	85733.
1979	5.	17.	97.	225.	501.	182.	40.	37.	26.	17.	5.	8.	57.	83	70237.
1980	4.	12.	27.	125.	132.	195.	20.	24.	30.	30.	27.	25.	54.	46	39471.
1981	16.	23.	35.	35.	689.	511.	175.	86.	22.	22.	14.	0.	136.	116	98688.
1982	0.	0.	11.	112.	67.	202.	72.	10.	16.	18.	15.	12.	44.	36	30909.
1983	17.	17.	41.	65.	97.	69.	25.	0.	0.	7.	17.	12.	31.	26	22047.
MIN	0.	0.	5.	28.	41.	17.	2.	0.	0.	7.	2.	0.	21.		14922.
MAX	55.	113.	277.	535.	1276.	2193.	871.	312.	463.	307.	134.	82.	333.		241420.
MEAN	15.	21.	82.	188.	363.	382.	157.	63.	51.	45.	28.	19.	118.	100	85122.

WILLOW CREEK NEAR GRANUM - BSAB015
RECORDED MONTHLY MEAN FLOW ADJUSTED TO NATURAL FLOW - CFS

4

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1919	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	297.	576.	203.	167.	48.	39.	-	-	-	-	-
1925	-	-	104.	338.	223.	379.	73.	36.	48.	172.	-	-	-	-	-
1926	-	-	44.	157.	84.	429.	318.	87.	524.	353.	-	-	-	-	-
1927	-	-	115.	195.	1139.	1835.	429.	322.	684.	595.	-	-	-	-	-
1928	-	-	375.	450.	435.	933.	1069.	325.	164.	130.	-	-	-	-	-
1929	-	-	95.	253.	705.	1229.	165.	57.	44.	48.	-	-	-	-	-
1930	-	181.	104.	285.	268.	246.	98.	24.	26.	31.	-	-	-	-	-
1931	-	-	46.	72.	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	342.	133.	115.	50.	11.	2.	12.	-	-	-	-	-
1936	-	-	143.	283.	52.	47.	4.	0.	0.	0.	-	-	-	-	-
1937	-	-	12.	85.	80.	314.	47.	21.	10.	25.	-	-	-	-	-
1938	-	-	68.	230.	535.	257.	146.	32.	9.	17.	-	-	-	-	-
1939	-	-	107.	77.	50.	564.	125.	20.	12.	38.	-	-	-	-	-
1940	-	-	54.	157.	219.	94.	40.	15.	64.	64.	-	-	-	-	-
1941	-	-	35.	51.	51.	108.	32.	15.	58.	58.	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1978	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MIN	-	181.	12.	51.	50.	47.	4.	0.	0.	0.	-	-	-	-	-
MAX	-	181.	375.	450.	1139.	1835.	1069.	325.	684.	595.	-	-	-	-	-
MEAN	-	181.	100.	214.	305.	495.	200.	81.	121.	113.	-	-	-	100	-

WILLOW CREEK NEAR NOLAN - 05AB002
RECORDED MONTHLY MEAN FLOW ADJUSTED TO NATURAL FLOW - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	-	305.	382.	493.	285.	137.	121.	-	-	-	-	-
1913	-	-	-	-	397.	318.	300.	187.	92.	86.	-	-	-	-	-
1914	-	-	-	182.	156.	151.	91.	31.	22.	125.	-	-	-	-	-
1915	-	-	-	130.	995.	1609.	1226.	543.	286.	186.	140.	106.	-	-	-
1916	18.	68.	165.	222.	321.	1248.	588.	174.	231.	248.	195.	107.	298.	184	216403.
1917	35.	29.	72.	422.	1364.	1864.	391.	159.	100.	83.	97.	24.	387.	238	280451.
1918	20.	31.	89.	100.	150.	114.	30.	23.	37.	35.	17.	6.	54.	34	35374.
1919	9.	9.	9.	112.	132.	47.	4.	10.	8.	17.	37.	13.	34.	21	24567.
1920	12.	15.	108.	302.	1218.	566.	202.	45.	22.	26.	26.	11.	214.	132	155101.
1921	2.	18.	65.	172.	161.	109.	37.	11.	10.	20.	13.	9.	52.	32	37720.
1922	0.	0.	8.	227.	382.	166.	83.	22.	8.	12.	10.	3.	77.	47	55815.
1923	2.	1.	18.	94.	130.	2243.	658.	273.	110.	71.	-	-	-	-	-
1924	-	-	79.	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	39.	155.	1413.	1618.	720.	328.	237.	192.	-	-	-	-	-
1943	-	-	156.	517.	279.	259.	97.	24.	13.	21.	-	-	-	-	-
1944	-	-	13.	116.	50.	45.	23.	15.	11.	5.	-	-	-	-	-
1945	-	-	18.	33.	271.	603.	182.	27.	34.	37.	-	-	-	-	-
1946	-	-	93.	77.	121.	432.	90.	28.	101.	110.	-	-	-	-	-
1947	-	-	175.	399.	515.	444.	127.	72.	132.	177.	-	-	-	-	-
1948	-	-	206.	745.	1971.	1537.	500.	240.	80.	78.	-	-	-	-	-
1949	-	-	31.	214.	179.	158.	46.	8.	10.	26.	-	-	-	-	-
1950	-	-	83.	160.	221.	159.	55.	23.	8.	11.	-	-	-	-	-
1951	-	-	401.	303.	666.	1480.	704.	290.	730.	513.	-	-	-	-	-
1952	-	-	184.	750.	421.	442.	265.	166.	76.	58.	-	-	-	-	-
1953	-	-	178.	270.	1003.	3117.	625.	214.	108.	66.	-	-	-	-	-
1954	-	-	71.	284.	545.	476.	127.	130.	126.	156.	-	-	-	-	-
1955	-	-	67.	531.	1221.	724.	532.	106.	64.	61.	-	-	-	-	-
1956	-	-	190.	164.	241.	117.	251.	56.	40.	28.	-	-	-	-	-
1957	-	-	117.	225.	351.	236.	74.	29.	26.	46.	-	-	-	-	-
1958	-	-	91.	559.	509.	307.	468.	168.	63.	40.	-	-	-	-	-
1959	-	-	159.	210.	454.	421.	131.	48.	51.	45.	-	-	-	-	-
1960	-	-	238.	144.	400.	215.	47.	22.	7.	14.	-	-	-	-	-
1961	-	-	35.	51.	182.	83.	16.	25.	13.	52.	-	-	-	-	-
1962	-	-	204.	442.	157.	112.	26.	10.	11.	12.	12.	8.	-	-	-
1963	5.	29.	23.	29.	66.	583.	718.	62.	27.	18.	22.	21.	134.	82	97081.
1964	13.	10.	17.	91.	585.	331.	102.	29.	35.	29.	20.	14.	107.	66	77716.
1965	9.	61.	72.	344.	156.	388.	364.	108.	123.	54.	53.	38.	151.	93	106006.
1966	11.	14.	108.	129.	212.	555.	152.	101.	38.	37.	33.	16.	117.	72	84930.
1967	10.	10.	133.	286.	1130.	1748.	362.	75.	31.	32.	43.	14.	323.	199	222962.
1968	44.	38.	102.	82.	115.	184.	86.	60.	129.	181.	-	-	-	-	-
1969	-	-	244.	766.	535.	855.	1194.	126.	55.	65.	-	-	-	-	-
1970	-	-	78.	150.	295.	445.	142.	32.	21.	40.	-	-	-	-	-
1971	-	-	102.	251.	150.	250.	48.	11.	13.	28.	-	-	-	-	-
1972	-	-	413.	412.	718.	417.	136.	149.	109.	94.	-	-	-	-	-
1973	-	-	120.	175.	429.	312.	80.	36.	40.	33.	-	-	-	-	-
1974	-	-	146.	254.	874.	551.	112.	81.	60.	52.	-	-	-	-	-
1975	-	-	57.	337.	773.	817.	354.	130.	65.	55.	-	-	-	-	-
1976	-	-	144.	165.	181.	111.	28.	365.	69.	50.	-	-	-	-	-
1977	-	-	46.	95.	45.	17.	4.	19.	17.	17.	-	-	-	-	-
1978	-	-	295.	184.	440.	541.	233.	105.	145.	60.	-	-	-	-	-
1979	-	-	171.	274.	621.	244.	52.	36.	22.	20.	-	-	-	-	-
1980	-	-	56.	161.	142.	266.	20.	29.	37.	39.	-	-	-	-	-
1981	-	-	58.	42.	793.	599.	211.	106.	34.	31.	-	-	-	-	-
1982	-	-	20.	146.	79.	225.	99.	14.	19.	21.	-	-	-	-	-
1983	-	-	62.	78.	112.	77.	31.	4.	1.	8.	-	-	-	-	-
MIN	0.	0.	8.	29.	45.	17.	4.	4.	1.	5.	10.	3.	34.		24567.
MAX	44.	88.	413.	768.	1971.	3117.	1226.	543.	730.	513.	195.	107.	387.		280451.
MEAN	14.	24.	116.	246.	469.	580.	254.	101.	76.	70.	51.	28.	138.	100	117677.

TROUT CREEK NEAR GRANUM - BSAB005
RECORDED MONTHLY MEAN FLOW ADJUSTED TO NATURAL FLOW - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	43.	61.	66.	59.	44.	26.	21.	-	-	-	-	-
1913	-	-	-	-	97.	82.	82.	35.	18.	17.	-	-	-	-	-
1914	-	-	-	34.	19.	17.	16.	10.	6.	11.	-	-	-	-	-
1915	-	-	-	26.	206.	312.	250.	98.	45.	32.	-	-	-	-	-
1916	-	-	-	-	92.	335.	110.	50.	57.	43.	-	-	-	-	-
1917	-	-	-	23.	309.	399.	106.	40.	26.	17.	-	-	-	-	-
1918	-	-	-	19.	14.	17.	11.	6.	7.	12.	-	-	-	-	-
1919	-	-	3.	14.	17.	9.	3.	3.	3.	3.	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	4.	43.	71.	41.	26.	8.	4.	5.	-	-	-	-	-
1923	-	-	8.	15.	32.	522.	179.	62.	31.	19.	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	2.	0.	1.	1.	2.	-	-	-	-	-
1978	-	-	38.	17.	66.	122.	39.	19.	15.	10.	-	-	-	-	-
1979	-	-	18.	31.	97.	53.	18.	9.	5.	4.	-	-	-	-	-
1980	-	-	10.	17.	9.	18.	4.	3.	2.	4.	-	-	-	-	-
1981	-	-	5.	4.	95.	109.	47.	31.	11.	9.	-	-	-	-	-
1982	-	-	7.	15.	8.	22.	17.	5.	3.	4.	-	-	-	-	-
1983	-	-	8.	8.	7.	8.	5.	0.	0.	0.	-	-	-	-	-
MIN	-	-	3.	4.	7.	2.	0.	0.	0.	0.	-	-	-	-	-
MAX	-	-	38.	43.	309.	522.	250.	98.	57.	43.	-	-	-	-	-
MEAN	-	-	11.	22.	75.	128.	88.	28.	18.	13.	-	-	-	100	-

MEADOW CREEK AT HART'S RANCH - B5AD006
RECORDED MONTHLY MEAN FLOW ADJUSTED TO NATURAL FLOW - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	13.	7.	8.	10.	5.	4.	3.	-	-	-	-	-
1913	-	-	-	-	8.	9.	4.	2.	1.	2.	-	-	-	-	-
1914	-	-	-	7.	2.	1.	0.	0.	0.	4.	-	-	-	-	-
1915	-	-	-	7.	18.	35.	33.	21.	9.	8.	-	-	-	-	-
1916	-	-	27.	8.	10.	28.	15.	7.	8.	7.	-	-	-	-	-
1917	-	-	-	8.	54.	74.	20.	9.	6.	5.	-	-	-	-	-
1918	-	-	-	4.	1.	1.	0.	0.	0.	0.	-	-	-	-	-
1919	-	-	2.	4.	1.	0.	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	2.	8.	8.	2.	3.	0.	0.	0.	-	-	-	-	-
1923	-	-	2.	8.	10.	137.	23.	8.	2.	2.	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	2.	1.	0.	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	1.	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1978	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1983	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MIN	-	-	2.	4.	1.	0.	0.	0.	0.	0.	-	-	-	-	-
MAX	-	-	27.	13.	54.	137.	33.	21.	9.	8.	-	-	-	-	-
MEAN	-	-	8.	7.	12.	30.	12.	6.	3.	3.	-	-	-	100	-

MEADOW CREEK NEAR THE MOUTH - B5AB029
RECORDED MONTHLY MEAN FLOW ADJUSTED TO NATURAL FLOW - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1919	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	2.	3.	10.	4.	3.	1.	1.	-	-	-	-	-
1967	-	-	9.	8.	74.	60.	8.	4.	2.	3.	-	-	-	-	-
1968	-	-	2.	4.	3.	4.	1.	0.	1.	2.	-	-	-	-	-
1969	-	-	32.	28.	13.	14.	17.	4.	2.	3.	-	-	-	-	-
1970	-	-	2.	4.	4.	3.	1.	0.	0.	0.	-	-	-	-	-
1971	-	-	3.	8.	3.	4.	0.	0.	0.	0.	-	-	-	-	-
1972	-	-	21.	16.	21.	12.	4.	2.	1.	3.	-	-	-	-	-
1973	-	-	2.	3.	4.	4.	0.	0.	0.	0.	-	-	-	-	-
1974	-	-	5.	8.	11.	10.	3.	4.	1.	1.	-	-	-	-	-
1975	-	-	0.	12.	19.	20.	12.	4.	2.	2.	-	-	-	-	-
1976	-	-	7.	5.	2.	2.	0.	5.	2.	1.	-	-	-	-	-
1977	-	-	0.	3.	1.	0.	0.	0.	0.	0.	-	-	-	-	-
1978	-	-	23.	6.	12.	15.	7.	2.	4.	2.	-	-	-	-	-
1979	-	-	5.	9.	17.	8.	2.	1.	0.	0.	-	-	-	-	-
1980	-	-	2.	3.	1.	1.	0.	0.	0.	0.	-	-	-	-	-
1981	-	-	1.	0.	9.	9.	5.	2.	1.	2.	-	-	-	-	-
1982	-	-	2.	5.	1.	1.	0.	0.	0.	0.	-	-	-	-	-
1983	-	-	1.	1.	0.	0.	0.	0.	0.	0.	-	-	-	-	-
MIN	-	-	0.	0.	0.	0.	0.	0.	0.	0.	-	-	-	-	-
MAX	-	-	32.	28.	74.	60.	17.	5.	4.	3.	-	-	-	-	-
MEAN	-	-	7.	7.	11.	10.	4.	2.	1.	1.	-	-	-	100	-

KYISKAP CREEK NEAR GRANUM - 05AB038
RECORDED MONTHLY MEAN FLOW ADJUSTED TO NATURAL FLOW - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1917	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1919	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1977	-	-	-	-	-	0.	0.	0.	0.	0.	-	-	-	-	-
1978	-	-	E5.	9.	8.	6.	4.	1.	4.	0.	-	-	-	-	-
1979	-	-	6.	9.	11.	3.	1.	0.	0.	0.	-	-	-	-	-
1980	-	-	4.	3.	3.	1.	0.	0.	0.	0.	-	-	-	-	-
1981	-	-	0.	0.	17.	7.	2.	0.	0.	0.	-	-	-	-	-
1982	-	-	1.	3.	0.	4.	1.	1.	1.	0.	-	-	-	-	-
1983	-	-	0.	0.	0.	0.	0.	0.	0.	0.	-	-	-	-	-
MIN	-	-	0.	0.	0.	0.	0.	0.	0.	0.	-	-	-	-	-
MAX	-	-	65.	9.	17.	7.	4.	1.	4.	0.	-	-	-	-	-
MEAN	-	-	13.	4.	7.	3.	1.	0.	1.	0.	-	-	-	100	-

HIGHWOOD RIVER NEAR ALDERSYDE - BSB L09
RECORDED MONTHLY MEAN FLOW ADJUSTED TO NATURAL FLOW - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC FT.
1912	-	-	-	-	-	-	1651.	751.	-	338.	-	-	-	-	-
1913	-	-	-	-	758.	1754.	819.	781.	386.	346.	-	-	-	-	-
1914	-	-	-	280.	911.	1330.	665.	202.	160.	312.	-	-	-	-	-
1915	-	-	-	263	2133.	3449.	2427.	1009.	465.	425.	-	-	-	-	-
1916	-	-	270.	462.	1284.	5309.	2375.	1274.	8720.	588.	362.	171.	-	-	-
1917	183.	79.	71.	326.	2234.	4133.	1046.	362.	238.	184.	173.	81.	760.	154	550022.
1918	71.	30.	66.	260.	662.	1391.	567.	446.	302.	230.	150.	107.	358.	73	258940.
1919	67.	55.	70.	217.	1105.	824.	323.	459.	171.	135.	72.	80.	300.	61	217375.
1920	62.	67.	85.	495.	1578.	2059.	1708.	395.	174.	132.	89.	63.	577.	118	419080.
1921	55.	48.	77.	252.	1040.	1417.	532.	255.	152.	147.	99.	88.	348.	71	251818.
1922	60.	50.	52.	208.	1100.	1461.	572.	226.	130.	104.	75.	39.	341.	69	246670.
1923	32.	33.	95.	207.	748.	4942.	1072.	466.	235.	187.	145.	116.	688.	140	457831.
1924	70.	78.	78.	393.	907.	1837.	807.	827.	293.	205.	124.	92.	476.	97	345657.
1925	72.	96.	217.	855.	1341.	1725.	586.	338.	309.	462.	280.	172.	535.	109	389923.
1926	105.	95.	148.	482.	465.	1153.	720.	257.	1324.	878.	434.	208.	522.	106	378171.
1927	132.	120.	151.	343.	1480.	3379.	1384.	1290.	1759.	1357.	352.	136.	992.	201	718373.
1928	281.	195.	621.	545.	1505.	2643.	1625.	464.	350.	315.	202.	136.	743.	151	539032.
1929	89.	71.	182.	324.	1505.	3725.	542.	206.	169.	157.	87.	63.	592.	120	428830.
1930	57.	272.	147.	724.	1297.	1976.	810.	268.	199.	152.	106.	69.	506.	103	366200.
1931	68.	78.	135.	161.	518.	801.	315.	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	1342.	1776.	678.	289.	-	-	-	-	-	-	-
1934	-	-	-	-	1197.	1111.	456.	141.	123.	128.	150.	-	-	-	-
1935	-	-	-	250.	700.	1255.	659.	288.	170.	151.	-	-	-	-	-
1936	-	-	57.	259.	651.	896.	203.	86.	35.	24.	-	-	-	-	-
1937	-	-	8.	93.	460.	1341.	431.	217.	151.	-	-	-	-	-	-
1938	-	-	-	223.	1891.	2153.	965.	195.	146.	140.	-	-	-	-	-
1939	-	-	89.	206.	631.	2193.	862.	262.	205.	227.	-	-	-	-	-
1940	-	-	75.	357.	1377.	994.	357.	205.	632.	429.	-	-	-	-	-
1941	-	-	-	134.	336.	785.	232.	259.	500.	464.	-	-	-	-	-
1942	-	-	81.	330.	3176.	3217.	1643.	926.	881.	440.	-	-	-	-	-
1943	-	-	-	862.	982.	1398.	958.	274.	162.	131.	-	-	-	-	-
1944	-	-	75.	168.	332.	493.	297.	197.	145.	110.	-	-	-	-	-
1945	-	-	67.	103.	1260.	2947.	1354.	366.	318.	330.	-	-	-	-	-
1946	-	-	188.	353.	1287.	2169.	889.	394.	543.	345.	-	-	-	-	-
1947	-	-	471.	761.	2004.	2022.	736.	390.	486.	502.	-	-	-	-	-
1948	-	-	57.	788.	2747.	2547.	874.	542.	207.	172.	-	-	-	-	-
1949	-	-	74.	310.	922.	963.	352.	165.	139.	157.	-	-	-	-	-
1950	-	-	85.	266.	1297.	1979.	817.	324.	153.	140.	-	-	-	-	-
1951	-	-	-	376.	2365.	3129.	2615.	988.	1693.	1265.	-	-	-	-	-
1952	-	-	353.	1364.	1382.	1838.	1065.	481.	262.	180.	-	-	-	-	-
1953	-	-	177.	506.	1819.	4943.	1359.	415.	223.	174.	-	-	-	-	-
1954	-	-	153.	398.	1785.	2308.	1313.	546.	442.	465.	-	-	-	-	-
1955	-	-	130.	405.	1301.	1925.	1373.	320.	194.	221.	-	-	-	-	-
1956	-	-	142.	467.	1752.	1597.	1265.	375.	204.	167.	-	-	-	-	-
1957	-	-	129.	395.	1468.	1059.	358.	193.	169.	157.	132.	61.	-	-	-
1958	60.	58.	80.	723.	1670.	1130.	1274.	429.	240.	163.	119.	94.	506.	103	366653.
1959	70.	64.	304.	275.	1178.	1858.	706.	254.	278.	232.	195.	135.	465.	94	335539.
1960	92.	102.	334.	337.	1131.	1490.	545.	276.	127.	94.	91.	118.	395.	80	286806.
1961	55.	73.	148.	108.	1437.	1665.	416.	312.	213.	497.	315.	101.	447.	91	323345.
1962	90.	149.	207.	527.	902.	1233.	446.	185.	164.	124.	86.	84.	350.	71	253190.
1963	44.	88.	93.	136.	645.	1967.	1893.	235.	140.	93.	92.	105.	463.	94	334933.
1964	60.	61.	53.	134.	1136.	2531.	709.	225.	196.	181.	121.	41.	453.	92	328828.
1965	75.	130.	166.	437.	682.	2224.	1341.	416.	382.	424.	245.	109.	553.	112	400567.
1966	101.	102.	161.	241.	1196.	1793.	759.	349.	179.	156.	151.	107.	442.	90	320281.
1967	95.	78.	165.	144.	1832.	3940.	982.	303.	161.	137.	92.	47.	665.	135	481355.
1968	58.	58.	96.	125.	644.	1444.	671.	370.	305.	349.	176.	117.	368.	75	267049.
1969	83.	86.	342.	869.	1588.	2545.	2232.	327.	182.	176.	126.	100.	726.	147	525533.
1970	50.	60.	89.	204.	1020.	2105.	603.	193.	158.	139.	87.	52.	397.	81	287258.
1971	45.	159.	92.	540.	1395.	2090.	570.	215.	147.	134.	121.	58.	464.	94	335607.
1972	60.	61.	305.	363.	1859.	2683.	853.	469.	286.	230.	166.	83.	616.	126	448935.
1973	92.	86.	199.	230.	1082.	1738.	557.	232.	237.	154.	112.	94.	402.	82	290832.
1974	63.	74.	187.	558.	1776.	3121.	885.	396.	309.	233.	134.	97.	654.	133	473262.
1975	78.	62.	79.	311.	1146.	2460.	1248.	425.	226.	184.	122.	114.	539.	109	390347.
1976	96.	91.	159.	336.	1222.	813.	517.	1125.	367.	214.	134.	113.	434.	88	315302.
1977	84.	119.	122.	196.	442.	452.	152.	313.	276.	205.	108.	81.	216.	44	156498.
1978	72.	61.	222.	306.	1144.	1930.	950.	372.	281.	208.	108.	72.	479.	97	346508.
1979	50.	71.	261.	335.	1167.	1057.	410.	259.	182.	131.	87.	73.	342.	69	247337.
1980	42.	53.	72.	490.	1175.	1691.	388.	366.	280.	265.	164.	173.	430.	87	311798.
1981	136.	111.	149.	171.	2284.	2161.	1073.	489.	211.	165.	111.	58.	597.	121	431867.
1982	47.	53.	66.	198.	518.	1452.	576.	188.	171.	177.	-	-	288.	58	208554.
1983	8.	9.	102.	267.	815.	894.	490.	194.	126.	114.	18.	11.	255.	52	184772.
MIN	8.	8.	8.	93.	332.	452.	203.	88.	39.	24.	18.	11.	152.		158498.
MAX	281.	272.	621.	1364.	3178.	5309.	2616.	1290.	8720.	1357.	434.	208.	1723.		718373.
MEAN	78.	85.	152.	370.	1232.	2008.	801.	400.	435.	270.	181.	88.	496.	100	358550.

STIMSON CREEK NEAR PEKISKO - 55BL007
RECORDED MONTHLY MEAN FLOW ADJUSTED TO NATURAL FLOW - CFS

13

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	-	-	-	-	-	55.	119	48.	15.	25.	-	-	-	-	-
1913	-	-	-	-	32.	83.	29	18.	10.	-	-	-	-	-	-
1914	-	-	-	-	-	27.	4.	0.	0.	-	-	-	-	-	-
1915	-	-	-	19.	-	-	-	-	-	-	-	-	-	-	-
1916	-	-	-	-	104.	326.	145.	90.	84.	55.	-	-	-	-	-
1917	-	-	-	-	299.	348.	33	8.	8.	6.	-	-	-	-	-
1918	-	-	-	19	20.	13.	2.	0.	0.	1.	-	-	-	-	-
1919	-	-	5.	19.	8.	1.	-	-	-	-	-	-	-	-	-
1920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1934	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	0.	0.	0.	-	-	-	-	-
1939	-	-	11.	12.	3.	61.	5.	5.	0.	2.	-	-	-	-	-
1940	-	-	2.	34.	49.	18.	5.	0.	2.	7.	-	-	-	-	-
1941	-	-	-	8.	9.	25.	2.	1.	11.	14.	-	-	-	-	-
1942	-	-	-	31.	513.	421.	125.	102.	115.	34.	-	-	-	-	-
1943	-	-	34.	179.	57.	38.	8.	0.	0.	0.	-	-	-	-	-
1944	-	-	2.	9.	5.	4.	1.	0.	0.	0.	-	-	-	-	-
1945	-	-	0.	7.	40.	99.	23.	2.	5.	5.	-	-	-	-	-
1946	-	-	13.	22.	27.	109.	20.	4.	8.	10.	-	-	-	-	-
1947	-	-	74.	101.	78.	129.	17.	14.	22.	18.	-	-	-	-	-
1948	-	-	15.	132.	230.	161.	41.	14.	2.	3.	-	-	-	-	-
1949	-	-	0.	45.	19.	27.	2.	0.	0.	0.	-	-	-	-	-
1950	-	-	5.	43.	36.	16.	5.	2.	0.	0.	-	-	-	-	-
1951	-	-	8.	59.	106.	240.	147.	90.	137.	100.	-	-	-	-	-
1952	-	-	47.	177.	146.	96.	41.	8.	7.	1.	-	-	-	-	-
1953	-	-	50.	97.	196.	489.	56.	4.	1.	2.	-	-	-	-	-
1954	-	-	4.	55.	89.	52.	13.	15.	14.	20.	-	-	-	-	-
1955	-	-	11.	104.	264.	69.	67.	4.	1.	2.	-	-	-	-	-
1956	-	-	-	23.	31.	11.	28.	4.	13.	2.	-	-	-	-	-
1957	-	-	23.	76.	66.	48.	4.	0.	1.	4.	-	-	-	-	-
1958	-	-	3.	84.	78.	55.	107.	12.	4.	3.	-	-	-	-	-
1959	-	-	15.	37.	84.	78.	12.	0.	1.	2.	-	-	-	-	-
1960	-	-	10.	15.	72.	20.	2.	0.	0.	0.	-	-	-	-	-
1961	-	-	2.	10.	20.	3.	0.	0.	0.	4.	-	-	-	-	-
1962	-	-	24.	70.	23.	15.	1.	0.	0.	0.	-	-	-	-	-
1963	-	-	3.	6.	7.	62.	90.	5.	2.	0.	-	-	-	-	-
1964	-	-	0.	17.	56.	42.	6.	0.	0.	0.	-	-	-	-	-
1965	-	-	16.	93.	22.	56.	43.	7.	14.	9.	-	-	-	-	-
1966	-	-	5.	31.	53.	104.	23.	10.	3.	6.	-	-	-	-	-
1967	-	-	32.	58.	205.	195.	20.	5.	2.	3.	-	-	-	-	-
1968	-	-	12.	17.	15.	28.	10.	10.	22.	27.	-	-	-	-	-
1969	-	-	25.	146.	84.	206.	246.	12.	6.	7.	-	-	-	-	-
1970	-	-	7.	25.	50.	95.	13.	3.	3.	4.	-	-	-	-	-
1971	-	-	6.	69.	33.	52.	6.	1.	2.	3.	-	-	-	-	-
1972	-	-	31.	64.	95.	31.	10.	8.	7.	12.	-	-	-	-	-
1973	-	-	13.	41.	79.	42.	5.	2.	2.	2.	-	-	-	-	-
1974	-	-	19.	54.	147.	50.	10.	7.	9.	9.	-	-	-	-	-
1975	-	-	0.	68.	153.	106.	36.	10.	6.	8.	-	-	-	-	-
1976	-	-	19.	27.	29.	14.	4.	53.	11.	7.	-	-	-	-	-
1977	-	-	12.	20.	15.	4.	2.	6.	6.	5.	-	-	-	-	-
1978	-	-	35.	38.	83.	55.	28.	11.	9.	5.	-	-	-	-	-
1979	-	-	31.	55.	84.	22.	10.	2.	1.	4.	-	-	-	-	-
1980	-	-	10.	54.	27.	39.	5.	5.	7.	8.	-	-	-	-	-
1981	-	-	14.	12.	151.	93.	30.	15.	7.	6.	-	-	-	-	-
1982	-	-	0.	26.	17.	51.	17.	4.	4.	4.	-	-	-	-	-
1983	-	-	8.	27.	21.	10.	3.	1.	1.	2.	-	-	-	-	-
MIN	-	-	0.	6.	3.	1.	0.	0.	0.	0.	-	-	-	-	-
MAX	-	-	74.	179.	513.	489.	246.	102.	137.	100.	-	-	-	-	-
MEAN	-	-	15.	51.	83.	86.	33.	12.	11.	9.	-	-	-	100	-

A P P E N D I X D

Willow Creek Basin (C-Files)

Arrays of Extended Natural Flows

SUMMARY OF REGRESSION ANALYSIS

Dependent Variable : WILLOW CREEK NEAR NOLAN

C5AB02

	INTERCEPT	INDEPENDENT VARIABLES					R=Coeff. of corr.	Se=Std. error of est.
		B5AB15	B5AB21	B5BLO9	LAG 1			
JAN.	0.2389		1.0196				0.5207	0.2980
FEB.	0.4753		0.7767				0.8017	0.2194
MAR.	1.0000	1.0000						
APR.	1.0000	1.0000						
MAY.	1.0000	1.0000						
JUN.	1.0000	1.0000						
JUL.	1.0000	1.0000						
AUG.	1.0000	1.0000						
SEP.	1.0000	1.0000						
OCT.	1.0000	1.0000						
NOV.	0.0285		1.1203				0.8681	0.1321
DEC.	0.2212		0.9836				0.9164	0.1003

		B5AB15	B5AB21	B5BLO9	LAG 1			
JAN.	0.0784				0.7097		0.5435	0.3808
FEB.	-0.3603				0.8388		0.7135	0.4098
MAR.	-0.5149			1.1442			0.7676	0.2880
APR.	-0.4448			1.0883			0.8100	0.1952
MAY.	-2.5760			1.6498			0.8183	0.2296
JUN.	-3.5341			1.8605			0.8986	0.2054
JUL.	-3.7881			2.0239			0.8973	0.2548
AUG.	-2.9435			1.8340			0.7873	0.3108
SEP.	-1.2456			1.1843			0.7067	0.3650
OCT.	-1.8312			1.5032			0.8508	0.2143
NOV.	0.1535				0.8726		0.9157	0.1666
DEC.	-0.2867				0.9890		0.9092	0.1877

		B5AB15	B5AB21	B5BLO9	LAG 1			
JAN.	-1.8792			1.5299			0.5724	0.4185
FEB.	1.5129			1.4554			0.4811	0.5021
MAR.								
APR.								
MAY.								
JUN.								
JUL.								
AUG.								
SEP.								
OCT.								
NOV.								
DEC.								

WILLOW CREEK NEAR NOLAN - CSAB002
 EXTENDED MONTHLY MEAN NATURAL FLOWS - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC FT
1912	9.0	18.0	148.0	236.0	305.0	382.0	493.0	285.0	137.0	121.0	94.0	46.0	190.0	116.0	137829
1913	18.0	28.0	51.0	336.0	397.0	318.0	300.0	187.0	92.0	86.0	89.0	34.0	169.0	103.0	121866
1914	15.0	22.0	49.0	182.0	156.0	151.0	91.0	31.0	22.0	125.0	56.0	47.0	62.4	51.0	59653
1915	14.0	15.0	61.0	130.0	995.0	1509.0	1226.0	542.0	285.0	189.0	140.0	106.0	447.0	274.0	323646
1916	18.0	68.0	165.0	222.0	321.0	1248.0	586.0	174.0	231.0	246.0	195.0	107.0	298.0	182.0	216403
1917	35.0	25.0	72.0	422.0	1364.0	1864.0	391.0	159.0	100.0	83.0	97.0	24.0	387.0	238.0	280451
1918	20.0	31.0	85.0	100.0	150.0	114.0	30.0	23.0	37.0	35.0	17.0	6.0	54.4	32.0	39374
1919	5.0	5.0	5.0	112.0	132.0	47.0	4.0	10.0	6.0	17.0	37.0	13.0	33.9	21.0	24557
1920	10.0	15.0	106.0	302.0	1216.0	566.0	202.0	45.0	22.0	25.0	26.0	11.0	214.0	121.0	155101
1921	2.0	18.0	65.0	102.0	161.0	105.0	37.0	11.0	10.0	20.0	13.0	5.0	52.1	32.0	37720
1922	0.0	0.0	6.0	227.0	382.0	166.0	83.0	22.0	6.0	12.0	10.0	3.0	77.1	47.0	55875
1923	2.0	1.0	16.0	94.0	130.0	2243.0	658.0	273.0	110.0	71.0	59.0	26.0	305.0	185.0	221790
1924	13.0	20.0	75.0	239.0	297.0	576.0	203.0	167.0	48.0	39.0	35.0	17.0	144.0	86.0	104696
1925	0.0	15.0	104.0	338.0	223.0	397.0	73.0	36.0	48.0	172.0	127.0	116.0	138.0	85.0	100052
1926	22.0	31.0	44.0	157.0	84.0	429.0	318.0	67.0	524.0	353.0	338.0	116.0	200.0	123.0	144897
1927	35.0	45.0	115.0	199.0	1139.0	1635.0	429.0	322.0	584.0	595.0	396.0	182.0	480.0	295.0	247855
1928	48.0	59.0	375.0	450.0	435.0	933.0	1069.0	325.0	164.0	130.0	100.0	49.0	345.0	212.0	250673
1929	19.0	27.0	95.0	253.0	705.0	1229.0	165.0	57.0	44.0	48.0	42.0	21.0	225.0	136.0	163053
1930	10.0	181.0	104.0	299.0	268.0	246.0	98.0	24.0	26.0	31.0	29.0	14.0	110.0	67.0	79511
1931	0.0	13.0	46.0	72.0	60.0	14.0	16.0	17.0	17.0	13.0	33.0	7.0	31.1	19.0	22506
1932	5.0	8.0	41.0	145.0	286.0	3371.0	66.0	39.0	38.0	33.0	30.0	15.0	158.0	103.0	122037
1933	5.0	13.0	41.0	306.0	383.0	325.0	88.0	37.0	33.0	20.0	19.0	10.0	107.0	66.0	77576
1934	6.0	10.0	77.0	194.0	212.0	136.0	29.0	16.0	17.0	20.0	21.0	11.0	72.0	44.0	52090
1935	6.0	31.0	32.0	342.0	133.0	119.0	50.0	11.0	2.0	12.0	32.0	6.0	61.1	37.0	44247
1936	4.0	6.0	143.0	283.0	52.0	47.0	4.0	0.0	0.0	0.0	7.0	1.0	46.0	26.0	32700
1937	3.0	3.0	12.0	85.0	80.0	314.0	47.0	21.0	10.0	29.0	27.0	13.0	53.3	33.0	36592
1938	8.0	13.0	66.0	230.0	535.0	257.0	146.0	32.0	9.0	17.0	17.0	8.0	112.0	55.0	61176
1939	5.0	10.0	107.0	77.0	50.0	564.0	125.0	20.0	12.0	38.0	34.0	17.0	86.0	54.0	63693
1940	5.0	14.0	54.0	157.0	219.0	94.0	40.0	15.0	64.0	64.0	54.0	27.0	67.6	41.0	49079
1941	12.0	19.0	39.0	51.0	51.0	108.0	32.0	15.0	58.0	58.0	49.0	24.0	42.6	26.0	21057
1942	12.0	16.0	39.0	155.0	1413.0	1516.0	720.0	328.0	237.0	192.0	140.0	69.0	414.0	254.0	299436
1943	24.0	33.0	196.0	517.0	275.0	255.0	97.0	24.0	13.0	21.0	20.0	10.0	124.0	76.0	60000
1944	4.0	5.0	13.0	116.0	50.0	45.0	23.0	15.0	11.0	5.0	11.0	5.0	25.1	15.0	18246
1945	2.0	3.0	18.0	33.0	271.0	603.0	182.0	27.0	34.0	37.0	32.0	49.0	106.0	66.0	77970
1946	24.0	24.0	93.0	77.0	121.0	432.0	90.0	28.0	101.0	110.0	52.0	33.0	58.6	61.0	71407
1947	31.0	58.0	175.0	395.0	515.0	444.0	127.0	72.0	132.0	177.0	127.0	84.0	195.0	120.0	141412
1948	69.0	41.0	205.0	746.0	1971.0	1537.0	500.0	240.0	80.0	76.0	45.0	14.0	461.0	283.0	334903
1949	9.0	9.0	31.0	214.0	175.0	156.0	46.0	8.0	10.0	26.0	29.0	13.0	61.0	37.0	44140
1950	4.0	23.0	83.0	160.0	221.0	159.0	55.0	23.0	6.0	11.0	11.0	13.0	64.4	39.0	46600
1951	11.0	10.0	401.0	303.0	666.0	1480.0	704.0	290.0	730.0	513.0	258.0	127.0	459.0	282.0	332196
1952	35.0	72.0	164.0	750.0	421.0	442.0	265.0	166.0	79.0	55.0	48.0	27.0	212.0	130.0	152586
1953	20.0	31.0	176.0	270.0	1003.0	3117.0	625.0	214.0	106.0	66.0	66.0	41.0	477.0	293.0	346570
1954	42.0	48.0	71.0	264.0	545.0	476.0	127.0	130.0	129.0	156.0	129.0	53.0	183.0	112.0	122353
1955	24.0	32.0	57.0	531.0	1221.0	724.0	532.0	109.0	54.0	61.0	27.0	36.0	287.0	176.0	207616
1956	35.0	21.0	190.0	164.0	241.0	117.0	251.0	56.0	40.0	26.0	39.0	21.0	101.0	52.0	73172
1957	9.0	27.0	117.0	225.0	351.0	236.0	74.0	29.0	26.0	46.0	50.0	27.0	102.0	52.0	73605
1958	20.0	21.0	91.0	559.0	509.0	307.0	468.0	168.0	63.0	40.0	38.0	35.0	164.0	119.0	140547
1959	26.0	18.0	199.0	210.0	454.0	421.0	131.0	48.0	51.0	45.0	65.0	44.0	143.0	86.0	103676
1960	39.0	48.0	238.0	144.0	400.0	215.0	47.0	22.0	7.0	14.0	13.0	13.0	100.0	62.0	72843
1961	18.0	18.0	35.0	51.0	182.0	83.0	16.0	25.0	13.0	52.0	48.0	24.0	47.1	29.0	34124
1962	58.0	62.0	204.0	442.0	157.0	112.0	28.0	10.0	11.0	12.0	12.0	6.0	92.7	57.0	57107
1963	5.0	25.0	23.0	29.0	56.0	583.0	718.0	62.0	27.0	18.0	22.0	21.0	134.0	82.0	57081
1964	13.0	10.0	17.0	91.0	585.0	331.0	102.0	29.0	35.0	29.0	20.0	14.0	107.0	56.0	77716
1965	9.0	61.0	72.0	344.0	156.0	386.0	364.0	106.0	123.0	94.0	53.0	36.0	151.0	92.0	109006
1966	11.0	14.0	108.0	125.0	212.0	556.0	152.0	101.0	36.0	37.0	33.0	16.0	117.0	72.0	84530
1967	10.0	10.0	133.0	286.0	1130.0	1746.0	352.0	75.0	31.0	32.0	43.0	14.0	323.0	198.0	233952
1968	44.0	36.0	102.0	82.0	115.0	184.0	85.0	60.0	126.0	182.0	103.0	55.0	56.4	60.0	71417
1969	44.0	31.0	244.0	768.0	535.0	855.0	1194.0	126.0	59.0	65.0	61.0	24.0	335.0	206.0	242578
1970	39.0	40.0	76.0	160.0	295.0	445.0	142.0	32.0	21.0	40.0	9.0	16.0	110.0	57.0	75482
1971	103.0	117.0	102.0	251.0	150.0	250.0	48.0	11.0	13.0	28.0	21.0	3.0	90.7	56.0	65695
1972	5.0	19.0	413.0	412.0	718.0	417.0	136.0	149.0	109.0	94.0	101.0	44.0	219.0	134.0	158777
1973	77.0	60.0	120.0	175.0	429.0	312.0	80.0	36.0	40.0	33.0	24.0	27.0	118.0	73.0	85670
1974	24.0	29.0	146.0	254.0	874.0	551.0	112.0	81.0	60.0	52.0	41.0	36.0	185.0	116.0	136932
1975	29.0	38.0	57.0	337.0	773.0	817.0	354.0	130.0	65.0	59.0	32.0	29.0	227.0	139.0	164539
1976	69.0	23.0	144.0	155.0	181.0	111.0	28.0	366.0	69.0	50.0	24.0	32.0	106.0	65.0	76774
1977	44.0	15.0	46.0	95.0	45.0	17.0	4.0	19.0	17.0	17.0	2.0	8.0	27.5	17.0	19880
1978	5.0	3.0	295.0	184.0	440.0	541.0	233.0	105.0	145.0	60.0	52.0	27.0	175.0	107.0	126662
1979	9.0	27.0	171.0	274.0	621.0	244.0	52.0	36.0	22.0	20.0	6.0	13.0	125.0	77.0	90650
1980	7.0	21.0	56.0	161.0	142.0	265.0	20.0	25.0	37.0	39.0	32.0	39.0	70.4	43.0	51136
1981	29.0	34.0	58.0	42.0	793.0	593.0	211.0	106.0	34.0	31.0	21.0	2.0	164.0	101.0	118933
1982	2.0	3.0	20.0	148.0	79.0	225.0	99.0	14.0	19.0	21.0	22.0	19.0	55.8	34.0	40419
1983	31.0	27.0	62.0	78.0	112.0	77.0	31.0	4.0	1.0	8.0	26.0	19.0	39.7	24.0	28746
MIN	0.0	0.0	8.0	29.0	45.0	17.0	4.0	0.0	0.0	0.0	1.0	1.0	25.0		18248
MAX	103.0	181.0	413.0	768.0	1971.0	3117.0	1226.0	543.0	730.0	595.0	375.0	182.0	480.0		347855
MEAN	21.0	28.0	107.0	240.0	426.0	558.0	233.0	93.0	82.0	76.0	57.0	32.0	163.0	100.0	138092

SUMMARY OF REGRESSION ANALYSIS

Dependent Variable : TROUT CREEK NEAR GRANUM

CSAB05

	INTERCEPT	INDEPENDENT VARIABLES				R=Coeff. of corr.	Se=Std. error of est.
		B5AB02	B5AB21	LAG 1			
JAN.	-0.1321			0.8428*			
FEB.	0.1746			0.6883*			
MAR.	0.0297	0.5562				0.8884	0.1666
APR.	-1.1106		1.1142			0.9856	0.0599
MAY.	-1.6255		1.2909			0.9738	0.1441
JUN.	-1.1274	1.1428				0.9743	0.1579
JUL.	-0.3888	0.8852				0.9731	0.1599
AUG.	-0.6031	0.9648				0.9398	0.2175
SEP.	-0.3027	0.7662				0.8706	0.2807
OCT.	-0.6263	0.9350				0.9284	0.1815
NOV.	0.1208			0.7271*			
DEC.	-0.0719	0.6965		0.8756*			

* SAME EQUATION AS FOR WILLOW CREEK ABOVE CHAIN LAKES

JAN.							
FEB.							
MAR.							
APR.							
MAY.							
JUN.							
JUL.							
AUG.							
SEP.							
OCT.							
NOV.							
DEC.							

JAN.							
FEB.							
MAR.							
APR.							
MAY.							
JUN.							
JUL.							
AUG.							
SEP.							
OCT.							
NOV.							
DEC.							

TROUT CREEK NEAR GRANUM - CSAB005
EXTENDED MONTHLY MEAN NATURAL FLOWS - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	T	AC FT.
1912	2.0	2.0	17.0	43.0	61.0	66.0	69.0	44.0	26.0	21.0	12.0	8.0	31.0	116	22512
1913	9.0	4.0	10.0	46.0	97.0	82.0	82.0	35.0	18.0	17.0	10.0	7.0	34.6	129	25061
1914	4.0	4.0	9.0	34.0	19.0	17.0	16.0	10.0	6.0	11.0	8.0	5.0	11.9	44.0	8640
1915	3.0	3.0	11.0	26.0	206	312	250	98.0	45.0	32.0	18.0	10.0	84.8	316	61415
1916	6.0	5.0	18.0	23.0	92.0	325	110	50.0	57.0	43.0	20.0	12.0	64.1	229	46524
1917	8.0	6.0	12.0	23.0	309	395	106	40.0	26.0	17.0	10.0	7.0	80.5	300	58258
1918	4.0	4.0	13.0	19.0	14.0	17.0	11.0	5.0	7.0	12.0	8.0	5.0	10.0	37.0	7254
1919	4.0	4.0	3.0	14.0	17.0	5.0	3.0	3.0	3.0	3.0	3.0	2.0	5.7	21.0	4100
1920	2.0	2.0	14.0	32.0	164	104	45.0	10.0	5.0	5.0	4.0	3.0	32.6	122	23685
1921	2.0	2.0	11.0	18.0	14.0	16.0	10.0	3.0	3.0	4.0	4.0	3.0	7.5	29.0	5441
1922	2.0	2.0	4.0	43.0	71.0	41.0	26.0	5.0	4.0	5.0	4.0	3.0	17.8	66.0	12902
1923	2.0	2.0	5.0	15.0	32.0	522	179	62.0	31.0	15.0	11.0	7.0	74.0	276	53564
1924	5.0	4.0	12.0	25.0	30.0	106	45.0	35.0	10.0	7.0	5.0	4.0	24.0	89.0	17403
1925	3.0	3.0	14.0	36.0	21.0	70.0	18.0	8.0	10.0	29.0	15.0	9.0	19.7	73.0	14233
1926	6.0	5.0	9.0	16.0	7.0	76.0	67.0	19.0	60.0	57.0	25.0	14.0	30.1	112	21816
1927	9.0	7.0	15.0	21.0	152	351	87.0	66.0	74.0	93.0	36.0	19.0	77.6	289	56186
1928	12.0	8.0	29.0	48.0	48.0	185	196	66.0	25.0	22.0	12.0	8.0	56.0	205	39953
1929	5.0	5.0	13.0	27.0	85.0	253	38.0	12.0	9.0	9.0	7.0	4.0	36.8	145	26096
1930	3.0	3.0	14.0	32.0	27.0	40.0	24.0	5.0	6.0	6.0	5.0	3.0	14.0	52.0	10147
1931	2.0	3.0	9.0	7.0	6.0	10.0	6.0	3.0	4.0	3.0	3.0	2.0	4.8	18.0	3501
1932	2.0	2.0	8.0	11.0	29.0	287	17.0	9.0	8.0	6.0	5.0	3.0	31.9	119	23171
1933	2.0	3.0	8.0	33.0	41.0	55.0	21.0	8.0	7.0	4.0	4.0	3.0	15.6	56.0	11407
1934	2.0	2.0	12.0	20.0	33.0	20.0	10.0	2.0	4.0	4.0	4.0	3.0	9.7	36.0	7025
1935	2.0	2.0	7.0	36.0	12.0	18.0	13.0	3.0	1.0	2.0	2.0	2.0	8.3	31.0	6024
1936	1.0	2.0	17.0	30.0	4.0	6.0	1.0	0.0	0.0	0.0	0.0	0.0	5.1	16.0	3671
1937	0.0	0.0	4.0	9.0	6.0	53.0	12.0	5.0	3.0	6.0	5.0	3.0	6.6	33.0	6379
1938	2.0	3.0	11.0	24.0	61.0	42.0	34.0	7.0	3.0	3.0	3.0	2.0	16.3	67.0	11629
1939	2.0	2.0	14.0	8.0	4.0	104	29.0	4.0	3.0	7.0	5.0	4.0	15.5	58.0	11187
1940	3.0	3.0	10.0	16.0	21.0	13.0	11.0	3.0	12.0	12.0	8.0	5.0	6.6	36.0	7065
1941	4.0	4.0	8.0	5.0	4.0	16.0	9.0	3.0	11.0	11.0	8.0	5.0	7.3	27.0	5308
1942	3.0	3.0	8.0	16.0	196	347	138	67.0	33.0	32.0	16.0	10.0	72.7	271	52536
1943	6.0	5.0	20.0	55.0	28.0	43.0	23.0	5.0	4.0	4.0	4.0	3.0	15.7	62.0	12056
1944	2.0	2.0	4.0	10.0	3.0	6.0	7.0	3.0	3.0	1.0	1.0	1.0	3.6	13.0	2596
1945	1.0	1.0	5.0	4.0	35.0	112	41.0	6.0	7.0	7.0	5.0	4.0	19.0	71.0	13755
1946	3.0	3.0	13.0	9.0	11.0	77.0	22.0	6.0	17.0	19.0	11.0	7.0	16.5	61.0	11931
1947	5.0	4.0	19.0	47.0	47.0	79.0	30.0	15.0	21.0	30.0	16.0	9.0	26.9	100	19452
1948	6.0	5.0	21.0	75.0	242	327	100	49.0	14.0	14.0	9.0	6.0	72.3	270	52508
1949	4.0	4.0	7.0	18.0	13.0	24.0	12.0	2.0	3.0	5.0	4.0	3.0	6.2	31.0	5966
1950	2.0	2.0	13.0	16.0	21.0	24.0	14.0	5.0	2.0	2.0	2.0	2.0	6.6	33.0	6367
1951	1.0	2.0	30.0	32.0	84.0	313	135	59.0	78.0	81.0	32.0	16.0	70.2	269	52272
1952	11.0	8.0	19.0	77.0	39.0	79.0	57.0	35.0	14.0	11.0	8.0	5.0	30.2	113	21935
1953	3.0	3.0	19.0	34.0	121	733	122	44.0	18.0	12.0	8.0	5.0	63.1	347	67395
1954	4.0	4.0	11.0	26.0	69.0	86.0	30.0	27.0	21.0	27.0	15.0	9.0	20.6	103	19912
1955	6.0	5.0	11.0	61.0	141	138	106	23.0	12.0	11.0	8.0	5.0	44.1	164	31640
1956	3.0	3.0	20.0	19.0	30.0	17.0	54.0	12.0	8.0	5.0	4.0	3.0	14.6	56.0	10636
1957	2.0	2.0	15.0	26.0	39.0	38.0	18.0	6.0	6.0	8.0	6.0	4.0	14.0	53.0	10290
1958	3.0	3.0	13.0	57.0	54.0	52.0	94.0	35.0	12.0	7.0	5.0	4.0	26.4	106	20577
1959	3.0	3.0	20.0	24.0	44.0	74.0	31.0	10.0	10.0	8.0	6.0	4.0	19.6	74.0	14329
1960	3.0	3.0	22.0	14.0	38.0	35.0	12.0	5.0	2.0	3.0	3.0	2.0	11.9	44.0	8612
1961	2.0	2.0	8.0	5.0	18.0	12.0	5.0	6.0	4.0	10.0	7.0	5.0	7.0	26.0	5098
1962	3.0	3.0	21.0	51.0	14.0	16.0	8.0	2.0	3.0	2.0	2.0	2.0	10.6	39.0	7648
1963	1.0	2.0	6.0	3.0	5.0	108	138	13.0	6.0	4.0	4.0	3.0	24.5	91.0	17754
1964	2.0	2.0	5.0	10.0	70.0	57.0	25.0	6.0	8.0	6.0	5.0	3.0	16.6	62.0	12069
1965	2.0	3.0	12.0	35.0	13.0	68.0	76.0	22.0	20.0	17.0	10.0	7.0	20.6	89.0	17242
1966	4.0	4.0	14.0	13.0	21.0	102	35.0	21.0	8.0	7.0	5.0	4.0	16.6	74.0	14356
1967	3.0	3.0	16.0	15.0	142	379	75.0	16.0	7.0	6.0	5.0	3.0	56.6	206	40374
1968	2.0	3.0	14.0	4.0	7.0	29.0	21.0	13.0	21.0	31.0	16.0	10.0	14.3	53.0	10364
1969	6.0	5.0	23.0	85.0	58.0	167	216	27.0	11.0	12.0	8.0	5.0	52.1	194	37740
1970	4.0	4.0	12.0	16.0	39.0	79.0	33.0	7.0	5.0	7.0	5.0	4.0	10.9	67.0	12986
1971	3.0	3.0	14.0	30.0	17.0	41.0	13.0	3.0	4.0	5.0	4.0	3.0	11.6	43.0	8434
1972	2.0	2.0	31.0	49.0	92.0	74.0	32.0	31.0	18.0	17.0	10.0	7.0	30.5	114	22136
1973	4.0	4.0	15.0	25.0	56.0	53.0	20.0	8.0	8.0	6.0	5.0	3.0	17.3	54.0	12524
1974	2.0	3.0	17.0	30.0	127	101	27.0	17.0	11.0	10.0	7.0	5.0	26.9	111	21638
1975	3.0	3.0	10.0	42.0	97.0	159	74.0	27.0	12.0	11.0	8.0	5.0	37.7	140	27275
1976	3.0	3.0	17.0	19.0	19.0	16.0	8.0	74.0	13.0	9.0	7.0	4.0	16.1	60.0	11685
1977	3.0	3.0	9.0	9.0	3.0	2.0	0.0	1.0	1.0	2.0	2.0	2.0	3.1	11.0	2229
1978	1.0	2.0	38.0	17.0	66.0	122	39.0	15.0	15.0	10.0	7.0	5.0	26.5	105	20636
1979	3.0	3.0	19.0	31.0	57.0	53.0	16.0	5.0	5.0	4.0	4.0	3.0	20.9	76.0	15108
1980	2.0	2.0	10.0	17.0	9.0	16.0	4.0	3.0	2.0	4.0	4.0	3.0	6.5	24.0	4707
1981	2.0	2.0	5.0	4.0	95.0	109	47.0	31.0	11.0	9.0	7.0	4.0	27.3	102	19773
1982	3.0	3.0	7.0	19.0	6.0	22.0	17.0	5.0	3.0	4.0	4.0	3.0	8.2	30.0	5913
1983	2.0	2.0	8.0	8.0	7.0	8.0	5.0	0.0	0.0	0.0	0.0	0.0	3.3	12.0	2416
MIN	0.	0.	3.	3.	3.	2.	0.	0.	0.	0.	0.	0.	3.		2229
MAX	12.	8.	38.	85.	309.	733.	250.	98.	78.	93.	36.	19.	93.		67398
MEAN	3.	3.	13.	26.	56.	111.	49.	19.	13.	13.	8.	5.	27.	100	19434

SUMMARY OF REGRESSION ANALYSIS

Dependent Variable : WILLOW CREEK NEAR CLARESHOLM

C5AB21

	INTERCEPT	INDEPENDENT VARIABLES					R=Coeff. of corr.	Se=Std. error of est.
		B5AB02						
P	JAN.	0.5335	0.2659				0.5207	0.1521
R	FEB.	-0.0006	0.8275				0.8017	0.2264
I	MAR.	-0.3101	1.0465				0.9429	0.1421
O	APR.	0.0854	0.9117				0.9757	0.0736
R	MAY.	0.1107	0.9285				0.9916	0.0485
I	JUN.	0.1327	0.9075				0.9924	0.0497
T	JUL.	-0.0584	0.9639				0.9891	0.0774
Y	AUG.	-0.2718	1.0708				0.9757	0.1126
	SEP.	-0.0695	0.9508				0.9829	0.0898
	OCT.	0.1357	0.8418				0.9680	0.0859
1	NOV.	0.2897	0.6727				0.8681	0.1023
	DEC.	-0.0266	0.8538				0.9164	0.0935

NOTE: C5AB02 IS USED FOR VOID FILLING

P	JAN.							
R	FEB.							
I	MAR.							
O	APR.							
R	MAY.							
I	JUN.							
T	JUL.							
Y	AUG.							
	SEP.							
	OCT.							
2	NOV.							
	DEC.							

P	JAN.							
R	FEB.							
I	MAR.							
O	APR.							
R	MAY.							
I	JUN.							
T	JUL.							
Y	AUG.							
	SEP.							
	OCT.							
3	NOV.							
	DEC.							

WILLOW CREEK NEAR CLARESHOLM - (CSAB02)
EXTENDED MONTHLY MEAN NATURAL FLOWS - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	S	AC FT
1912	8.0	10.0	90.0	177	281	299	344	227	98.0	77.0	41.0	25.0	138	117	100383
1913	7.0	15.0	30.0	310	334	253	213	145	88.0	58.0	34.0	19.0	124	105	89843
1914	7.0	13.0	29.0	140	140	129	88.0	21.0	17.0	80.0	42.0	25.0	59.4	50.0	42990
1915	7.0	15.0	41.0	103	784	1103	829	454	195	113	54.0	50.0	314	255	227480
1916	7.0	33.0	102	188	274	878	408	134	159	142	88.0	51.0	201	170	146271
1917	9.0	18.0	43.0	301	1050	1261	275	122	71.0	56.0	42.0	14.0	272	230	197094
1918	8.0	17.0	54.0	81.0	135	100	23.0	15.0	27.0	27.0	13.0	4.0	42.1	36.0	30450
1919	8.0	8.0	5.0	90.0	120	45.0	3.0	8.0	8.0	15.0	22.0	8.0	27.7	23.0	20055
1920	7.0	9.0	86.0	222	945	427	146	32.0	17.0	21.0	17.0	7.0	150	135	156420
1921	4.0	11.0	37.0	132	144	96.0	28.0	7.0	8.0	17.0	11.0	6.0	41.9	35.0	31305
1922	3.0	1.0	4.0	171	322	140	62.0	15.0	8.0	11.0	9.0	2.0	52.5	50.0	45217
1923	4.0	1.0	10.0	77.0	118	1491	455	217	78.0	49.0	30.0	17.0	210	179	153279
1924	7.0	12.0	47.0	179	255	434	146	128	35.0	30.0	21.0	11.0	105	92.0	78867
1925	6.0	9.0	63.0	246	195	310	55.0	25.0	35.0	104	51.0	54.0	96.1	81.0	69568
1926	8.0	17.0	26.0	122	79.0	332	226	64.0	349	191	77.0	54.0	125	109	93152
1927	9.0	23.0	70.0	152	888	1119	301	259	451	296	105	80.0	314	265	227002
1928	10.0	29.0	242	319	363	673	726	262	114	82.0	43.0	26.0	241	204	175244
1929	7.0	15.0	57.0	189	569	864	120	41.0	32.0	36.0	24.0	13.0	154	138	116557
1930	6.0	74.0	63.0	220	232	201	73.0	16.0	20.0	25.0	19.0	9.0	75.5	67.0	57552
1931	6.0	8.0	27.0	60.0	75.0	67.0	15.0	7.0	13.0	12.0	11.0	5.0	25.5	22.0	18468
1932	5.0	6.0	24.0	85.0	246	954	50.0	27.0	27.0	26.0	19.0	9.0	122	103	88703
1933	8.0	8.0	24.0	226	323	258	65.0	26.0	25.0	17.0	14.0	7.0	63.3	70.0	60341
1934	6.0	7.0	46.0	148	271	117	30.0	8.0	13.0	18.0	15.0	7.0	57.2	48.0	41435
1935	6.0	7.0	18.0	249	121	104	38.0	7.0	2.0	11.0	10.0	4.0	47.9	40.0	34713
1936	5.0	6.0	88.0	209	51.0	45.0	3.0	1.0	1.0	1.0	2.0	1.0	34.2	25.0	24861
1937	3.0	2.0	7.0	70.0	75.0	250	36.0	14.0	8.0	23.0	18.0	8.0	42.7	36.0	30906
1938	6.0	8.0	39.0	173	440	209	107	22.0	7.0	15.0	13.0	6.0	87.5	74.0	63410
1939	5.0	7.0	65.0	64.0	49.0	426	92.0	13.0	9.0	29.0	21.0	11.0	55.7	55.0	47564
1940	6.0	9.0	32.0	122	192	84.0	31.0	10.0	46.0	45.0	29.0	16.0	51.9	44.0	37652
1941	7.0	11.0	23.0	44.0	50.0	95.0	25.0	10.0	42.0	42.0	27.0	14.0	32.3	27.0	23502
1942	7.0	11.0	23.0	121	1085	1109	496	264	163	114	54.0	35.0	292	246	211164
1943	8.0	18.0	123	363	241	210	72.0	16.0	10.0	18.0	15.0	7.0	51.7	77.0	66405
1944	2.0	2.0	5.0	81.0	46.0	52.0	25.0	6.0	5.0	9.0	6.0	3.0	20.6	16.0	15074
1945	1.0	1.0	20.0	37.0	264	522	151	27.0	33.0	41.0	21.0	31.0	57.6	62.0	70657
1946	13.0	15.0	51.0	72.0	115	348	75.0	27.0	66.0	54.0	32.0	21.0	74.3	63.0	53792
1947	17.0	45.0	125	312	358	330	94.0	74.0	143	116	71.0	54.0	145	123	105374
1948	37.0	25.0	138	481	1276	885	295	135	57.0	44.0	28.0	9.0	285	241	207172
1949	5.0	4.0	15.0	131	132	120	35.0	4.0	5.0	14.0	15.0	8.0	41.4	35.0	29990
1950	2.0	14.0	41.0	121	190	135	25.0	16.0	5.0	13.0	8.0	6.0	45.4	40.0	35782
1951	6.0	5.0	277	224	561	1115	471	223	463	307	134	80.0	333	273	232664
1952	19.0	60.0	156	491	310	324	190	127	63.0	42.0	28.0	17.0	153	129	110577
1953	11.0	20.0	115	235	744	2193	396	119	67.0	45.0	39.0	25.0	333	262	241420
1954	23.0	36.0	27.0	165	482	323	64.0	82.0	95.0	127	72.0	34.0	131	111	95042
1955	13.0	21.0	24.0	400	840	465	395	77.0	46.0	43.0	18.0	23.0	199	168	143756
1956	19.0	12.0	37.0	140	250	110	195	40.0	30.0	24.0	25.0	13.0	80.3	66.0	58314
1957	5.0	17.0	58.0	185	309	297	42.0	22.0	20.0	25.0	31.0	17.0	75.0	67.0	57187
1958	11.0	12.0	53.0	372	357	263	357	111	46.0	26.0	24.0	22.0	142	120	102690
1959	14.0	10.0	146	173	339	262	75.0	34.0	38.0	34.0	35.0	26.0	99.8	84.0	72218
1960	21.0	36.0	203	104	304	135	26.0	19.0	6.0	10.0	9.0	6.0	74.1	63.0	53762
1961	9.0	10.0	21.0	44.0	171	67.0	15.0	16.0	11.0	46.0	30.0	15.0	36.1	32.0	27616
1962	31.0	50.0	160	338	137	91.0	26.0	9.0	11.0	11.0	10.0	7.0	73.2	62.0	52980
1963	6.0	14.0	15.0	28.0	68.0	497	508	45.0	24.0	18.0	13.0	11.0	104	68.0	75477
1964	5.0	5.0	5.0	80.0	458	295	86.0	22.0	33.0	24.0	16.0	8.0	85.4	76.0	64925
1965	5.0	52.0	16.0	241	133	345	255	63.0	95.0	54.0	33.0	25.0	111	94.0	85604
1966	11.0	12.0	98.0	100	185	433	95.0	58.0	24.0	25.0	24.0	11.0	60.7	77.0	55575
1967	5.0	9.0	124	116	842	1075	179	51.0	15.0	16.0	18.0	7.0	205	174	146832
1968	10.0	10.0	41.0	36.0	85.0	163	66.0	46.0	95.0	150	59.0	35.0	67.1	57.0	46564
1969	24.0	20.0	125	535	424	685	871	92.0	42.0	41.0	37.0	15.0	244	206	176290
1970	21.0	28.0	56.0	122	310	396	110	21.0	18.0	25.0	7.0	10.0	54.1	75.0	68114
1971	55.0	113	81.0	205	160	242	40.0	4.0	11.0	22.0	14.0	2.0	76.7	65.0	55981
1972	3.0	11.0	225	325	601	284	81.0	130	81.0	70.0	58.0	28.0	159	135	115730
1973	41.0	48.0	75.0	176	405	257	55.0	29.0	25.0	24.0	16.0	17.0	98.2	83.0	71084
1974	13.0	19.0	111	213	775	430	84.0	61.0	46.0	40.0	26.0	23.0	154	130	111729
1975	16.0	26.0	52.0	283	629	569	249	90.0	41.0	38.0	21.0	16.0	172	145	124165
1976	37.0	14.0	116	138	179	97.0	28.0	312	47.0	30.0	16.0	20.0	86.7	73.0	62532
1977	24.0	8.0	27.0	73.0	41.0	17.0	2.0	16.0	15.0	17.0	2.0	5.0	20.6	17.0	14928
1978	3.0	0.0	126	127	454	361	196	78.0	68.0	36.0	32.0	17.0	126	106	91065
1979	5.0	17.0	97.0	229	501	182	40.0	37.0	20.0	17.0	5.0	5.0	97.0	82.0	70237
1980	4.0	12.0	27.0	135	132	195	20.0	24.0	30.0	30.0	21.0	25.0	54.4	45.0	39471
1981	16.0	23.0	35.0	35.0	685	511	175	86.0	22.0	22.0	14.0	0.0	136	115	98811
1982	0.0	0.0	11.0	112	67.0	202	72.0	10.0	16.0	18.0	15.0	12.0	44.5	36.0	32212
1983	17.0	17.0	41.0	69.0	97.0	69.0	25.0	0.0	0.0	7.0	17.0	12.0	30.9	26.0	22403
MIN	0.	0.	4.	28.	41.	17.	2.	0.	0.	1.	2.	0.	21.		14928.
MAX	55.	113.	277.	535.	1276.	2193.	871.	454.	463.	307.	134.	82.	333.		241420.
MEAN	11.	18.	68.	178.	346.	408.	164.	70.	57.	50.	29.	19.	118.	100	85792.

SUMMARY OF REGRESSION ANALYSIS

Dependent Variable : WILLOW CREEK ABOVE CHAIN LAKES

CSAB28

	INTERCEPT	INDEPENDENT VARIABLES					R=Coeff. of corr.	Se=Std error of est.
		B5AB02	B5AB21	B5BL09	B5BL07	LAG 1		
JAN.	-0.1320					0.9428	0.7933	0.1797
FEB.	0.1746					0.6883	0.8368	0.1329
MAR.	-0.5778	0.2360		0.9119			0.8016	0.2066
APR.	0.1628		0.2827		0.4877		0.8660	0.1288
MAY.	-0.0929		0.9964		-0.1667		0.9783	0.0768
JUN.	0.1218		0.5822		0.2862		0.9750	0.0856
JUL.	0.2297		0.4262		0.3485		0.9581	0.1260
AUG.	-3.5588	0.2020		1.7161			0.9415	0.1507
SEP.	-0.1259		0.5610		0.4169		0.9041	0.1921
OCT.	-2.6742	0.2767		1.4075			0.9044	0.1372
NOV.	0.1208					0.7271	0.9150	0.1000
DEC.	-0.0719					0.8756	0.7466	0.1933

		B5AB02	B5AB21	B5BL09	B5BL07	LAG 1		
JAN.	0.2671	0.2650					0.8583	0.0807
FEB.								
MAR.								
APR.	-0.6670	0.3991		0.3991			0.8789	0.1229
MAY.	-1.0169	0.6328		0.4828			0.9782	0.0770
JUN.	-0.8420	0.5869		0.4239			0.9585	0.1099
JUL.	-1.9855	0.2947		0.9882			0.9433	0.1462
AUG.								
SEP.	-0.4707	0.7195					0.8334	0.2410
OCT.								
NOV.								
DEC.								

JAN.								
FEB.								
MAR.								
APR.								
MAY.								
JUN.								
JUL.								
AUG.								
SEP.								
OCT.								
NOV.								
DEC.								

WILLOW CREEK ABOVE CHAIN LAKES - CSAB028
EXTENDED MONTHLY MEAN NATURAL FLOWS - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	S	AC FT
1912	3.0	3.0	12.0	45.0	82.0	115	108	74.0	30.0	29.0	15.0	9.0	44.7	115	32477
1913	8.0	5.0	4.0	78.0	147	109	54.0	73.0	20.0	27.0	15.0	9.0	45.8	117	33164
1914	6.0	5.0	4.0	24.0	63.0	58.0	17.0	5.0	4.0	26.0	14.0	9.0	20.5	52.0	14817
1915	6.0	5.0	5.0	23.0	102	54.0	186	141	36.0	45.0	21.0	12.0	95.3	244	69029
1916	8.0	6.0	15.0	49.0	99.0	358	125	167	82.0	77.0	31.0	17.0	86.1	221	62523
1917	11.0	8.0	4.0	52.0	316	451	83.0	19.0	19.0	11.0	8.0	5.0	80.6	207	58260
1918	3.0	3.0	3.0	21.0	85.0	40.0	8.0	18.0	5.0	12.0	8.0	5.0	16.0	41.0	11580
1919	4.0	4.0	2.0	22.0	67.0	12.0	3.0	18.0	3.0	5.0	4.0	3.0	12.2	31.0	8611
1920	2.0	2.0	5.0	57.0	302	151	77.0	17.0	8.0	5.0	4.0	3.0	52.8	135	38352
1921	2.0	2.0	4.0	32.0	69.0	45.0	15.0	6.0	4.0	5.0	4.0	3.0	18.3	42.0	11800
1922	2.0	2.0	2.0	32.0	122	53.0	20.0	6.0	3.0	3.0	3.0	2.0	21.6	56.0	15775
1923	2.0	2.0	3.0	23.0	51.0	490	89.0	33.0	20.0	11.0	8.0	5.0	55.4	152	43000
1924	3.0	3.0	4.0	46.0	95.0	145	37.0	79.0	11.0	10.0	7.0	5.0	37.1	95.0	26537
1925	3.0	3.0	11.0	80.0	95.0	114	20.0	12.0	11.0	50.0	23.0	13.0	36.3	93.0	26277
1926	8.0	6.0	6.0	43.0	31.0	100	38.0	9.0	61.0	149	50.0	26.0	44.0	113	31864
1927	16.0	10.0	8.0	40.0	281	347	78.0	193	74.0	318	87.0	42.0	125	321	90716
1928	25.0	14.0	38.0	70.0	154	225	121	33.0	26.0	27.0	15.0	9.0	63.1	162	45824
1929	6.0	5.0	9.0	42.0	209	308	23.0	6.0	10.0	8.0	6.0	4.0	52.8	135	38231
1930	3.0	3.0	7.0	69.0	105	91.0	30.0	8.0	7.0	6.0	5.0	3.0	28.1	72.0	20362
1931	2.0	3.0	6.0	16.0	31.0	31.0	7.0	2.0	5.0	2.0	2.0	2.0	9.2	24.0	6558
1932	1.0	2.0	3.0	22.0	102	330	19.0	10.0	9.0	8.0	8.0	4.0	42.7	109	30992
1933	3.0	3.0	3.0	58.0	134	102	24.0	10.0	8.0	4.0	4.0	3.0	25.7	76.0	21531
1934	2.0	2.0	6.0	38.0	113	50.0	13.0	2.0	5.0	5.0	4.0	3.0	20.4	52.0	14737
1935	2.0	2.0	2.0	42.0	50.0	49.0	20.0	7.0	1.0	5.0	4.0	3.0	15.6	40.0	11295
1936	2.0	2.0	3.0	39.0	27.0	25.0	3.0	1.0	1.0	0.0	1.0	1.0	6.7	22.0	6317
1937	1.0	1.0	0.0	14.0	30.0	89.0	13.0	5.0	4.0	10.0	7.0	5.0	14.9	36.0	10774
1938	3.0	3.0	4.0	33.0	201	97.0	46.0	5.0	2.0	5.0	4.0	3.0	33.6	86.0	24307
1939	2.0	2.0	5.0	16.0	32.0	146	25.0	7.0	3.0	12.0	8.0	5.0	21.6	55.0	15816
1940	4.0	4.0	3.0	32.0	79.0	40.0	13.0	4.0	9.0	34.0	17.0	10.0	20.6	53.0	15100
1941	7.0	5.0	4.0	12.0	27.0	47.0	9.0	7.0	17.0	37.0	18.0	11.0	13.6	43.0	12143
1942	7.0	6.0	3.0	30.0	298	442	130	110	94.0	48.0	22.0	13.0	101	258	72768
1943	8.0	6.0	12.0	97.0	95.0	84.0	22.0	8.0	3.0	5.0	4.0	3.0	29.0	74.0	20829
1944	2.0	2.0	2.0	15.0	28.0	20.0	7.0	4.0	2.0	2.0	2.0	2.0	7.3	19.0	5325
1945	1.0	2.0	2.0	10.0	121	182	43.0	13.0	10.0	20.0	12.0	7.0	35.8	52.0	25930
1946	5.0	4.0	9.0	22.0	52.0	153	31.0	15.0	19.0	29.0	15.0	9.0	30.2	77.0	21682
1947	6.0	5.0	24.0	70.0	136	156	32.0	18.0	45.0	56.0	25.0	14.0	49.0	126	35476
1948	9.0	7.0	4.0	90.0	401	294	70.0	41.0	10.0	10.0	7.0	5.0	75.2	203	57467
1949	3.0	3.0	3.0	37.0	64.0	55.0	10.0	3.0	2.0	6.0	5.0	3.0	16.2	41.0	11714
1950	2.0	3.0	4.0	35.0	82.0	51.0	14.0	11.0	2.0	4.0	4.0	3.0	16.0	45.0	13020
1951	2.0	2.0	20.0	49.0	202	378	133	120	182	277	79.0	39.0	124	316	89810
1952	23.0	13.0	19.0	105	105	142	58.0	31.0	17.0	10.0	7.0	5.0	44.5	114	22307
1953	3.0	3.0	10.0	63.0	241	687	88.0	25.0	8.0	10.0	7.0	5.0	95.6	245	59175
1954	3.0	3.0	7.0	45.0	178	119	27.0	37.0	29.0	49.0	22.0	13.0	44.5	114	32267
1955	8.0	6.0	6.0	76.0	258	159	94.0	14.0	6.0	13.0	9.0	6.0	54.9	141	39743
1956	4.0	4.0	8.0	27.0	111	41.0	52.0	16.0	15.0	7.0	5.0	4.0	24.6	63.0	17867
1957	3.0	3.0	7.0	53.0	120	89.0	14.0	5.0	4.0	8.0	6.0	4.0	25.4	66.0	19111
1958	3.0	3.0	4.0	67.0	150	107	106	26.0	11.0	8.0	6.0	4.0	41.5	106	30040
1959	3.0	3.0	17.0	36.0	127	118	25.0	8.0	6.0	13.0	9.0	6.0	31.0	80.0	22459
1960	4.0	4.0	19.0	20.0	117	55.0	9.0	8.0	2.0	3.0	3.0	2.0	20.6	53.0	14951
1961	2.0	2.0	6.0	13.0	82.0	21.0	5.0	10.0	3.0	39.0	19.0	11.0	17.9	46.0	12974
1962	7.0	6.0	12.0	60.0	64.0	40.0	7.0	3.0	3.0	4.0	4.0	3.0	17.7	46.0	12849
1963	2.0	2.0	3.0	9.0	39.0	160	116	7.0	6.0	3.0	3.0	2.0	29.4	75.0	21279
1964	2.0	2.0	2.0	20.0	195	108	21.0	6.0	5.0	8.0	6.0	4.0	31.5	81.0	22901
1965	3.0	3.0	8.0	63.0	63.0	142	63.0	15.0	32.0	24.0	11.0	7.0	26.5	94.0	26414
1966	4.0	4.0	13.0	26.0	75.0	126	44.0	27.0	11.0	5.0	8.0	4.0	29.3	75.0	21219
1967	3.0	3.0	5.0	33.0	278	360	27.0	7.0	2.0	3.0	4.0	5.0	60.9	156	44077
1968	5.0	3.0	8.0	16.0	44.0	84.0	26.0	20.0	40.0	46.0	20.0	15.0	27.3	70.0	19839
1969	9.0	8.0	10.0	110	143	284	234	12.0	5.0	7.0	5.0	4.0	69.6	178	50366
1970	0.0	2.0	4.0	19.0	128	182	39.0	5.0	5.0	6.0	5.0	3.0	33.3	85.0	24101
1971	3.0	5.0	4.0	39.0	89.0	106	13.0	3.0	4.0	7.0	7.0	2.0	23.5	60.0	17000
1972	2.0	3.0	20.0	73.0	189	90.0	31.0	50.0	35.0	29.0	18.0	10.0	46.0	116	33378
1973	9.0	9.0	17.0	52.0	151	84.0	14.0	8.0	8.0	5.0	4.0	3.0	30.5	78.0	22096
1974	2.0	2.0	7.0	63.0	241	142	19.0	18.0	15.0	14.0	8.0	7.0	45.1	116	32616
1975	2.0	3.0	4.0	36.0	229	213	83.0	23.0	10.0	10.0	5.0	4.0	52.1	134	37704
1976	4.0	3.0	10.0	37.0	78.0	45.0	16.0	154	20.0	11.0	7.0	6.0	32.8	84.0	23814
1977	4.0	5.0	5.0	15.0	16.0	5.0	3.0	8.0	11.0	10.0	5.0	4.0	7.9	20.0	5734
1978	3.0	3.0	12.0	46.0	150	116	65.0	25.0	18.0	12.0	11.0	7.0	39.2	101	28380
1979	5.0	4.0	17.0	46.0	151	47.0	11.0	9.0	5.0	4.0	3.0	6.0	25.6	66.0	18714
1980	4.0	2.0	2.0	43.0	65.0	93.0	11.0	12.0	18.0	15.0	14.0	9.0	24.0	62.0	17429
1981	9.0	7.0	12.0	16.0	320	160	49.0	23.0	6.0	6.0	5.0	2.0	51.7	132	37402
1982	0.0	0.0	0.0	20.0	30.0	93.0	21.0	3.0	4.0	7.0	5.0	3.0	15.5	40.0	11195
1983	2.0	3.0	8.0	34.0	52.0	43.0	14.0	5.0	1.0	4.0	3.0	1.0	15.0	39.0	10889
MIN	0.	0.	0.	9.	16.	8.	3.	1.	1.	0.	1.	1.	7.		5326
MAX	25.	14.	38.	110.	401.	687.	234.	193.	182.	318.	87.	42.	125.		90716
MEAN	5.	4.	8.	42.	129.	148.	44.	27.	17.	25.	12.	7.	39.	100	28254

SUMMARY OF REGRESSION ANALYSIS

Dependent Variable : MEADOW CREEK NEAR THE MOUTH

C5AB29

	INTERCEPT	INDEPENDENT VARIABLES				R=Coeff. of corr.	Se=Std. error of est.
		B5AB06	B5AB02	LAG 1			
JAN.	-0.1321			0.9428*			
FEB.	0.1746			0.8883*			
MAR.	1.0000	1.0000					
APR.	1.0000	1.0000					
MAY.	1.0000	1.0000					
JUN.	1.0000	1.0000					
JUL.	1.0000	1.0000					
AUG.	1.0000	1.0000					
SEP.	1.0000	1.0000					
OCT.	1.0000	1.0000					
NOV.	0.1208			0.7271*			
DEC.	-0.0719			0.8756*			

* SAME EQUATION AS FOR WILLOW ABOVE CHAIN LAKES

	B5AB21	B5AB02					
JAN.							
FEB.							
MAR.	-1.5300	1.1531			0.7672	0.9306	
APR.	-1.5898	1.0332			0.8629	0.1673	
MAY.	-2.3183	1.2330			0.8843	0.2570	
JUN.	-2.0739	1.1293			0.8899	0.2939	
JUL.	-1.1254	0.7783			0.8584	0.2729	
AUG.	-0.7858	0.6230			0.8382	0.2124	
SEP.	-0.4224	0.3777			0.6255	0.2443	
OCT.	-0.7813	0.6100			0.7732	0.1855	
NOV.							
DEC.							

JAN.							
FEB.							
MAR.							
APR.							
MAY.							
JUN.							
JUL.							
AUG.							
SEP.							
OCT.							
NOV.							
DEC.							

MEADOW CREEK NEAR THE MOUTH - CSAB029
EXTENDED MONTHLY MEAN NATURAL FLOWS - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC FT.
1912	2.0	2.0	5.0	13.0	7.0	8.0	10.0	8.0	4.0	3.0	3.0	2.0	5.3	122	3872
1913	2.0	2.0	1.0	10.0	6.0	8.0	4.0	2.0	1.0	2.0	2.0	2.0	3.9	89.0	2826
1914	1.0	2.0	1.0	7.0	2.0	1.0	0.0	0.0	0.0	4.0	4.0	3.0	2.1	48.0	1351
1915	2.0	2.0	2.0	7.0	18.0	35.0	33.0	21.0	8.0	8.0	5.0	4.0	12.3	282	8914
1916	3.0	3.0	27.0	8.0	10.0	28.0	15.0	7.0	8.0	7.0	5.0	4.0	10.4	239	7577
1917	3.0	3.0	2.0	8.0	54.0	74.0	20.0	8.0	8.0	5.0	4.0	3.0	15.2	365	11544
1918	2.0	2.0	3.0	4.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	25.0	778
1919	0.0	0.0	2.0	4.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	23.0	725
1920	1.0	1.0	4.0	9.0	11.0	11.0	5.0	2.0	7.0	1.0	1.0	1.0	5.7	130	4134
1921	1.0	1.0	2.0	3.0	3.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.7	38.0	1208
1922	1.0	1.0	2.0	8.0	8.0	2.0	3.0	0.0	0.0	0.0	0.0	0.0	2.1	48.0	1511
1923	0.0	0.0	2.0	8.0	10.0	137	23.0	8.0	2.0	2.0	2.0	2.0	15.6	364	11514
1924	1.0	2.0	3.0	7.0	4.0	31.0	5.0	4.0	2.0	2.0	2.0	2.0	3.6	81.0	2777
1925	1.0	2.0	4.0	11.0	8.0	7.0	2.0	2.0	2.0	4.0	4.0	3.0	3.6	82.0	2765
1926	2.0	2.0	1.0	3.0	1.0	8.0	1.0	3.0	1.0	1.0	5.0	3.0	3.9	90.0	2834
1927	2.0	3.0	14.0	6.0	18.0	38.0	8.0	15.0	4.0	2.0	5.0	4.0	9.6	220	6950
1928	3.0	3.0	17.0	14.0	9.0	19.0	17.0	2.0	3.0	3.0	3.0	2.0	8.3	189	5998
1929	2.0	2.0	3.0	8.0	15.0	25.0	4.0	2.0	2.0	2.0	2.0	2.0	5.9	135	4276
1930	1.0	2.0	4.0	3.0	5.0	4.0	1.0	1.0	1.0	1.0	0.0	0.0	2.4	55.0	1745
1931	0.0	0.0	4.0	2.0	1.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33	8.0	240
1932	0.0	0.0	6.0	3.0	5.0	22.0	2.0	3.0	1.0	1.0	0.0	0.0	3.6	81.0	2579
1933	0.0	0.0	1.0	10.0	7.0	2.0	2.0	2.0	3.0	1.0	1.0	1.0	2.7	61.0	1932
1934	1.0	1.0	1.0	6.0	5.0	2.0	1.0	1.0	1.0	1.0	0.0	0.0	1.8	42.0	1329
1935	0.0	0.0	0.0	11.0	2.0	2.0	2.0	1.0	0.0	0.0	0.0	0.0	1.5	34.0	1081
1936	0.0	0.0	5.0	9.0	1.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	30.0	564
1937	0.0	0.0	0.0	3.0	1.0	8.0	1.0	1.0	0.0	0.0	0.0	0.0	0.99	23.0	720
1938	0.0	0.0	2.0	7.0	11.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0	2.8	63.0	2003
1939	1.0	1.0	4.0	2.0	4.0	11.0	3.0	1.0	1.0	2.0	2.0	2.0	2.6	59.0	1655
1940	1.0	2.0	2.0	5.0	4.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.1	48.0	1505
1941	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0	2.0	2.0	2.0	2.0	1.5	34.0	1081
1942	1.0	2.0	1.0	5.0	37.0	35.0	13.0	8.0	3.0	4.0	4.0	3.0	5.5	219	6904
1943	2.0	2.0	3.0	15.0	5.0	4.0	3.0	1.0	1.0	1.0	0.0	0.0	3.5	82.0	2580
1944	0.0	0.0	0.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.66	15.0	452
1945	0.0	0.0	0.0	0.0	5.0	12.0	4.0	1.0	1.0	1.0	1.0	1.0	2.2	50.0	1571
1946	1.0	1.0	3.0	2.0	2.0	8.0	2.0	1.0	2.0	3.0	3.0	2.0	2.5	57.0	1805
1947	2.0	2.0	8.0	13.0	11.0	8.0	3.0	2.0	2.0	4.0	4.0	3.0	5.2	119	3747
1948	2.0	2.0	9.0	24.0	55.0	33.0	8.0	5.0	2.0	2.0	2.0	2.0	12.3	281	8510
1949	1.0	2.0	1.0	7.0	3.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	44.0	1375
1950	1.0	1.0	2.0	5.0	4.0	3.0	2.0	1.0	1.0	1.0	1.0	1.0	1.9	44.0	1388
1951	1.0	1.0	19.0	9.0	15.0	32.0	12.0	1.0	5.0	7.0	5.0	4.0	5.7	222	7025
1952	3.0	3.0	11.0	24.0	8.0	8.0	5.0	4.0	2.0	2.0	2.0	2.0	5.2	143	4528
1953	1.0	2.0	7.0	8.0	24.0	74.0	11.0	5.0	2.0	2.0	2.0	2.0	11.5	257	8425
1954	1.0	2.0	1.0	9.0	13.0	9.0	3.0	3.0	2.0	4.0	4.0	3.0	4.3	99.0	3128
1955	2.0	2.0	1.0	17.0	31.0	14.0	10.0	3.0	2.0	2.0	2.0	2.0	7.4	165	5330
1956	1.0	2.0	6.0	5.0	4.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	2.6	63.0	2061
1957	1.0	1.0	3.0	7.0	7.0	4.0	2.0	1.0	1.0	2.0	2.0	2.0	2.8	63.0	1995
1958	1.0	2.0	3.0	18.0	16.0	5.0	9.0	4.0	2.0	2.0	2.0	2.0	5.0	115	3524
1959	1.0	2.0	9.0	6.0	9.0	8.0	3.0	2.0	2.0	2.0	2.0	2.0	4.0	92.0	2904
1960	1.0	2.0	14.0	4.0	3.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0	3.3	75.0	2370
1961	1.0	1.0	1.0	1.0	3.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	1.4	33.0	1025
1962	1.0	2.0	10.0	14.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	3.1	70.0	2227
1963	1.0	1.0	1.0	1.0	1.0	11.0	13.0	2.0	1.0	1.0	0.0	0.0	2.8	63.0	1987
1964	0.0	0.0	0.0	3.0	13.0	8.0	3.0	1.0	1.0	1.0	1.0	1.0	2.5	58.0	1823
1965	1.0	1.0	1.0	11.0	2.0	3.0	7.0	1.0	2.0	3.0	3.0	2.0	3.6	82.0	2552
1966	2.0	2.0	1.0	2.0	3.0	10.0	4.0	3.0	1.0	1.0	1.0	1.0	3.0	65.0	2174
1967	1.0	1.0	5.0	8.0	74.0	60.0	8.0	4.0	2.0	3.0	3.0	2.0	14.7	336	10610
1968	2.0	2.0	2.0	4.0	3.0	4.0	1.0	0.0	1.0	0.0	0.0	0.0	1.6	36.0	1142
1969	0.0	2.0	32.0	22.0	13.0	14.0	17.0	4.0	2.0	3.0	3.0	2.0	10.0	230	7273
1970	2.0	2.0	2.0	4.0	4.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	1.5	34.0	1081
1971	0.0	0.0	3.0	8.0	3.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	34.0	1063
1972	0.0	0.0	21.0	16.0	21.0	12.0	4.0	2.0	1.0	3.0	3.0	2.0	7.1	163	5163
1973	2.0	2.0	2.0	3.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	32.0	1020
1974	0.0	0.0	5.0	8.0	11.0	10.0	3.0	4.0	1.0	1.0	0.0	0.0	3.6	82.0	2605
1975	0.0	0.0	0.0	12.0	19.0	20.0	12.0	4.0	2.0	2.0	2.0	2.0	6.3	144	4540
1976	1.0	2.0	7.0	5.0	2.0	2.0	0.0	8.0	2.0	1.0	0.0	0.0	2.3	54.0	1695
1977	0.0	0.0	0.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.33	8.0	240
1978	0.0	0.0	23.0	6.0	12.0	15.0	7.0	2.0	4.0	2.0	0.0	0.0	6.3	144	4558
1979	1.0	2.0	5.0	9.0	17.0	8.0	2.0	1.0	0.0	0.0	0.0	0.0	3.8	85	2721
1980	0.0	0.0	2.0	3.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.58	13.0	422
1981	0.0	0.0	0.0	0.0	9.0	5.0	5.0	2.0	1.0	2.0	2.0	2.0	2.7	62.0	1944
1982	1.0	2.0	2.0	5.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.99	23.0	714
1983	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.17	4.0	121

MIN 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

SUMMARY OF REGRESSION ANALYSIS

Dependent Variable : KYISKAP CREEK NEAR GRANUM

C5AB38

P R I O R I T Y 1	INTERCEPT		INDEPENDENT VARIABLES				R=Coeff. of corr.	Se=Std. error of est.
	JAN.							
	FEB.	C5AB038 = 1.0376 * C5AB029						
	MAR.	FOR ALL MONTHS						
	APR.							
	MAY.							
	JUN.							
	JUL.							
	AUG.							
	SEP.							
	OCT.							
	NOV.							
	DEC.							

P R I O R I T Y 2	JAN.							
	FEB.							
	MAR.							
	APR.							
	MAY.							
	JUN.							
	JUL.							
	AUG.							
	SEP.							
	OCT.							
	NOV.							
	DEC.							

P R I O R I T Y 3	JAN.							
	FEB.							
	MAR.							
	APR.							
	MAY.							
	JUN.							
	JUL.							
	AUG.							
	SEP.							
	OCT.							
	NOV.							
	DEC.							

KYISKAP CREEK NEAR GRANUM - C5AB038
EXTENDED MONTHLY MEAN NATURAL FLOWS - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC FT
1912	2.0	2.0	5.0	14.0	8.0	9.0	11.0	5.0	4.0	3.0	3.0	2.0	5.0	123	4114
1913	2.0	2.0	1.0	15.0	6.0	10.0	4.0	2.0	1.0	2.0	2.0	2.0	4.0	86	2945
1914	1.0	2.0	1.0	8.0	2.0	1.0	0.0	0.0	0.0	4.0	4.0	3.0	2.0	47	1567
1915	2.0	2.0	2.0	8.0	19.0	38.0	36.0	23.0	10.0	9.0	5.0	4.0	13.0	289	9542
1916	3.0	3.0	29.0	9.0	11.0	30.0	16.0	8.0	9.0	8.0	5.0	4.0	11.0	245	8194
1917	3.0	3.0	2.0	9.0	58.0	80.0	22.0	10.0	6.0	5.0	4.0	3.0	17.0	371	12397
1918	2.0	2.0	3.0	4.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	23	778
1919	0.0	0.0	2.0	4.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	23	726
1920	1.0	1.0	4.0	10.0	33.0	12.0	5.0	2.0	1.0	1.0	1.0	1.0	5.0	131	4375
1921	1.0	1.0	2.0	5.0	3.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	36	1206
1922	1.0	1.0	2.0	9.0	9.0	2.0	3.0	0.0	0.0	0.0	0.0	0.0	2.0	45	1622
1923	0.0	0.0	2.0	6.0	11.0	147.0	25.0	6.0	2.0	2.0	2.0	2.0	17.0	366	12294
1924	1.0	2.0	3.0	8.0	5.0	12.0	5.0	4.0	2.0	2.0	2.0	2.0	4.0	87	2895
1925	1.0	2.0	4.0	12.0	4.0	8.0	2.0	2.0	2.0	4.0	4.0	3.0	4.0	87	2886
1926	2.0	2.0	1.0	5.0	1.0	9.0	8.0	3.0	4.0	6.0	5.0	3.0	4.0	89	2955
1927	2.0	3.0	4.0	6.0	30.0	39.0	9.0	6.0	4.0	9.0	6.0	4.0	10.0	221	7375
1928	3.0	3.0	18.0	15.0	10.0	20.0	18.0	6.0	3.0	3.0	3.0	2.0	9.0	166	6301
1929	2.0	2.0	3.0	9.0	17.0	28.0	4.0	2.0	2.0	2.0	2.0	2.0	5.0	135	4516
1930	1.0	2.0	4.0	10.0	5.0	4.0	3.0	1.0	0.0	0.0	0.0	0.0	2.0	54	1805
1931	0.0	0.0	0.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	240
1932	0.0	0.0	0.0	3.0	5.0	31.0	2.0	2.0	1.0	1.0	0.0	0.0	4.0	61.0	2696
1933	0.0	0.0	1.0	11.0	8.0	6.0	2.0	2.0	1.0	1.0	1.0	1.0	3.0	62.0	2053
1934	1.0	1.0	2.0	6.0	6.0	2.0	1.0	1.0	1.0	1.0	0.0	0.0	2.0	40.0	1329
1935	0.0	0.0	0.0	12.0	2.0	2.0	2.0	1.0	0.0	0.0	0.0	0.0	2.0	34.0	1140
1936	0.0	0.0	5.0	10.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	31.0	1023
1937	0.0	0.0	0.0	3.0	1.0	6.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	22.0	720
1938	0.0	0.0	2.0	8.0	12.0	4.0	4.0	1.0	1.0	1.0	1.0	1.0	3.0	64.0	2124
1939	1.0	1.0	4.0	2.0	1.0	12.0	3.0	1.0	1.0	2.0	2.0	2.0	3.0	56	1526
1940	1.0	2.0	2.0	5.0	4.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	45	1505
1941	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0	2.0	2.0	2.0	2.0	1.0	32	1087
1942	1.0	2.0	1.0	5.0	40.0	38.0	14.0	6.0	3.0	4.0	4.0	3.0	10.0	220	7326
1943	2.0	2.0	9.0	17.0	5.0	4.0	3.0	1.0	1.0	1.0	0.0	0.0	4.0	81.0	2717
1944	0.0	0.0	3.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	14.0	482
1945	0.0	0.0	0.0	0.0	5.0	13.0	4.0	1.0	1.0	1.0	1.0	1.0	2.0	46.0	1630
1946	1.0	1.0	3.0	2.0	2.0	9.0	2.0	1.0	2.0	3.0	3.0	2.0	3.0	56.0	1858
1947	2.0	2.0	9.0	14.0	12.0	9.0	3.0	2.0	2.0	4.0	4.0	3.0	6.0	120	3969
1948	2.0	2.0	10.0	26.0	59.0	36.0	10.0	5.0	2.0	2.0	2.0	2.0	13.0	286	9576
1949	1.0	2.0	1.0	8.0	3.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	43.0	1436
1950	1.0	1.0	2.0	5.0	4.0	3.0	2.0	1.0	1.0	1.0	1.0	1.0	2.0	42.0	1386
1951	1.0	1.0	20.0	10.0	16.0	34.0	13.0	6.0	5.0	8.0	5.0	4.0	10.0	223	7450
1952	3.0	3.0	12.0	26.0	9.0	9.0	6.0	4.0	2.0	2.0	2.0	2.0	7.0	144	4830
1953	1.0	2.0	8.0	9.0	26.0	80.0	12.0	5.0	2.0	2.0	2.0	2.0	13.0	272	9085
1954	1.0	2.0	1.0	10.0	12.0	10.0	3.0	3.0	2.0	4.0	4.0	3.0	5.0	99.0	3316
1955	2.0	2.0	1.0	18.0	33.0	15.0	11.0	3.0	2.0	2.0	2.0	2.0	6.0	169	5623
1956	1.0	2.0	6.0	5.0	4.0	2.0	6.0	2.0	2.0	1.0	1.0	1.0	3.0	60.0	2001
1957	1.0	1.0	3.0	8.0	8.0	4.0	2.0	1.0	1.0	2.0	2.0	2.0	3.0	62.0	2116
1958	1.0	2.0	3.0	19.0	11.0	5.0	10.0	4.0	2.0	2.0	2.0	2.0	5.0	114	3806
1959	1.0	2.0	10.0	6.0	10.0	9.0	3.0	2.0	2.0	2.0	2.0	2.0	4.0	92.0	3086
1960	1.0	2.0	15.0	4.0	9.0	4.0	1.0	1.0	1.0	1.0	1.0	1.0	3.0	75.0	2493
1961	1.0	1.0	1.0	1.0	3.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	1.0	31.0	1029
1962	1.0	2.0	11.0	15.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	3.0	70.0	2348
1963	1.0	1.0	1.0	1.0	1.0	12.0	14.0	2.0	1.0	1.0	0.0	0.0	3.0	63.0	2118
1964	0.0	0.0	0.0	3.0	14.0	6.0	3.0	1.0	1.0	1.0	1.0	1.0	3.0	56.0	1884
1965	1.0	1.0	1.0	12.0	2.0	8.0	8.0	3.0	2.0	3.0	3.0	2.0	4.0	63.0	2773
1966	2.0	2.0	6.0	2.0	3.0	11.0	4.0	3.0	1.0	1.0	1.0	1.0	3.0	67.0	2233
1967	1.0	1.0	10.0	9.0	80.0	65.0	9.0	4.0	2.0	3.0	3.0	2.0	16.0	343	11459
1968	2.0	2.0	2.0	4.0	3.0	4.0	1.0	0.0	1.0	0.0	0.0	0.0	2.0	34.0	1142
1969	0.0	2.0	34.0	30.0	14.0	15.0	18.0	4.0	2.0	3.0	3.0	2.0	11.0	231	7696
1970	2.0	2.0	2.0	4.0	4.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	32.0	1087
1971	0.0	0.0	3.0	9.0	3.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	34.0	1142
1972	0.0	0.0	23.0	17.0	23.0	13.0	4.0	2.0	1.0	3.0	3.0	2.0	8.0	166	5528
1973	2.0	2.0	2.0	3.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	31.0	1020
1974	0.0	0.0	5.0	9.0	12.0	11.0	3.0	4.0	1.0	1.0	0.0	0.0	4.0	84.0	2787
1975	0.0	0.0	0.0	13.0	20.0	22.0	13.0	4.0	2.0	2.0	2.0	2.0	7.0	145	4842
1976	1.0	2.0	8.0	5.0	2.0	2.0	0.0	6.0	2.0	1.0	0.0	0.0	2.0	53.0	1757
1977	0.0	0.0	0.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	240
1978	0.0	0.0	65.0	9.0	8.0	8.0	4.0	1.0	4.0	0.0	0.0	0.0	8.0	176	5527
1979	0.0	0.0	6.0	9.0	11.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	3.0	55.0	1827
1980	0.0	0.0	4.0	3.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	20.0	658
1981	0.0	0.0	0.0	0.0	17.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	47.0	1585
1982	0.0	0.0	1.0	3.0	0.0	4.0	1.0	1.0	1.0	0.0	0.0	0.0	1.0	20.0	660
1983	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
MAX	3.0	3.0	65.0	30.0	80.0	147.0	36.0	23.0	10.0	9.0	6.0	4.0	17.0		12391
MEAN	1.0	1.0	6.0	8.0	11.0	14.0	5.0	3.0	2.0	2.0	2.0	1.0	5.0	100	3339

SUMMARY OF REGRESSION ANALYSIS

Dependent Variable : WILLOW CREEK BELOW LANE CREEK

C5AB39

	INTERCEPT	INDEPENDENT VARIABLES					R=Coeff. of corr.	Se=Std error of est.
		B5AB21	B5AB02	B5BLO9	LAG 1			
P	JAN.	-0.1321			0.9428*			
R	FEB.	0.1746			0.6883*			
I	MAR.	0.3638	0.7365				0.9745	0.0729
O	APR.	0.1580	0.8971				0.9957	0.0261
R	MAY.	0.0135	0.9668				0.9912	0.0615
I	JUN.	0.1689	0.9066				0.9987	0.0253
T	JUL.	0.2227		0.8210			0.9966	0.0461
Y	AUG.	0.3228		0.7368			0.9961	0.0359
	SEP.	0.0402	0.9643				0.9885	0.0920
1	OCT.	-1.8611		1.3977			0.9050	0.0900
	NOV.	0.1208			0.7271*			
	DEC.	-0.0719			0.8756*			

* SAME EQUATION USED FOR VOID FILLING AS FOR WILLOW CREEK ABOVE CHAIN LAKES

P	JAN.							
R	FEB.							
I	MAR.							
O	APR.							
R	MAY.							
I	JUN.							
T	JUL.							
Y	AUG.							
	SEP.							
2	OCT.							
	NOV.							
	DEC.							

P	JAN.							
R	FEB.							
I	MAR.							
O	APR.							
R	MAY.							
I	JUN.							
T	JUL.							
Y	AUG.							
	SEP.							
3	OCT.							
	NOV.							
	DEC.							

WILLOW CREEK BELOW LANE CREEK - CSAB030
EXTENDED MONTHLY MEAN NATURAL FLOWS - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC FT.
1912	3.0	3.0	64.0	145	224	259	271	135	89.0	47.0	22.0	13.0	107	113	77363
1913	8.0	6.0	28.0	240	284	223	180	99.0	62.0	49.0	22.0	13.0	102	107	73525
1914	8.0	6.0	28.0	118	123	121	88.0	28.0	17.0	42.0	20.0	12.0	46.2	52.0	35632
1915	7.0	6.0	36.0	80.0	848	846	573	218	177	85.0	27.0	15.0	227	240	164212
1916	10.0	7.0	70.0	139	235	687	314	94.0	146	102	38.0	21.0	155	164	112520
1917	13.0	9.0	37.0	233	860	955	224	88.0	87.0	20.0	12.0	7.0	211	223	152590
1918	5.0	4.0	44.0	72.0	118	96.0	27.0	21.0	26.0	28.0	15.0	9.0	36.5	41.0	28153
1919	6.0	5.0	8.0	80.0	106	47.0	5.0	11.0	6.0	14.0	9.0	6.0	25.3	27.0	18319
1920	4.0	4.0	51.0	178	777	358	130	35.0	17.0	13.0	9.0	6.0	122	140	56143
1921	4.0	4.0	33.0	113	126	92.0	32.0	12.0	8.0	15.0	9.0	6.0	37.5	40.0	27451
1922	4.0	4.0	6.0	141	274	130	63.0	21.0	6.0	9.0	7.0	4.0	56.0	59.0	40546
1923	3.0	3.0	13.0	65.0	104	1112	344	131	73.0	21.0	12.0	8.0	157	166	113267
1924	5.0	4.0	39.0	147	219	363	131	91.0	34.0	23.0	13.0	8.0	89.7	95.0	55101
1925	5.0	5.0	49.0	195	169	268	57.0	29.0	34.0	73.0	30.0	17.0	77.6	82.0	56170
1926	10.0	8.0	25.0	104	70.0	285	189	56.0	311	179	57.0	29.0	110	116	79799
1927	18.0	11.0	53.0	127	731	857	242	148	398	329	89.0	43.0	255	269	184306
1928	26.0	14.0	132	246	308	541	512	149	106	43.0	20.0	12.0	176	186	127811
1929	8.0	6.0	45.0	154	476	678	110	41.0	31.0	16.0	10.0	6.0	132	139	95445
1930	4.0	4.0	49.0	177	200	181	72.0	22.0	20.0	15.0	9.0	6.0	63.4	67.0	45878
1931	4.0	4.0	26.0	55.0	67.0	67.0	19.0	12.0	13.0	7.0	5.0	4.0	23.6	25.0	17100
1932	3.0	3.0	24.0	76.0	211	742	52.0	31.0	26.0	18.0	11.0	7.0	99.6	105	72323
1933	5.0	4.0	24.0	181	275	227	66.0	30.0	24.0	11.0	8.0	5.0	71.3	76.0	51982
1934	3.0	3.0	39.0	124	232	111	34.0	11.0	13.0	12.0	8.0	5.0	46.6	53.0	36060
1935	4.0	4.0	19.0	197	106	99.0	41.0	12.0	2.0	15.0	9.0	6.0	42.8	45.0	30972
1936	4.0	4.0	63.0	169	46.0	47.0	5.0	2.0	1.0	1.0	1.0	1.0	26.5	30.0	20703
1937	1.0	1.0	10.0	64.0	67.0	220	39.0	20.0	8.0	25.0	14.0	8.0	39.7	42.0	28717
1938	5.0	5.0	34.0	142	371	187	100	27.0	7.0	14.0	9.0	6.0	76.0	80.0	55055
1939	4.0	4.0	50.0	59.0	44.0	357	82.0	19.0	9.0	27.0	15.0	9.0	56.9	60.0	41222
1940	6.0	5.0	30.0	104	166	82.0	35.0	15.0	44.0	66.0	26.0	16.0	46.6	50.0	36177
1941	10.0	7.0	23.0	42.0	45.0	92.0	29.0	15.0	40.0	73.0	30.0	17.0	25.3	37.0	76563
1942	10.0	8.0	23.0	104	887	850	370	150	149	68.0	28.0	16.0	223	236	161451
1943	10.0	7.0	80.0	276	207	188	71.0	22.0	10.0	13.0	9.0	6.0	75.0	79.0	54276
1944	4.0	4.0	12.0	72.0	42.0	53.0	22.0	15.0	5.0	10.0	7.0	5.0	20.9	22.0	15146
1945	3.0	3.0	21.0	36.0	243	429	120	24.0	32.0	46.0	21.0	12.0	82.6	87.0	59827
1946	8.0	6.0	42.0	65.0	101	297	67.0	24.0	62.0	49.0	22.0	13.0	62.9	66.0	45564
1947	8.0	6.0	81.0	241	304	283	89.0	49.0	137	82.0	33.0	18.0	111	117	80428
1948	11.0	8.0	87.0	355	1038	693	274	119	54.0	18.0	11.0	7.0	223	236	162240
1949	5.0	4.0	20.0	111	116	113	39.0	10.0	5.0	16.0	10.0	6.0	36.0	40.0	27479
1950	4.0	4.0	36.0	104	165	127	45.0	21.0	5.0	14.0	9.0	6.0	45.2	46.0	32694
1951	4.0	4.0	145	179	469	854	363	137	408	298	83.0	41.0	245	262	180494
1952	24.0	13.0	100	361	264	279	163	91.0	60.0	20.0	12.0	7.0	116	123	84250
1953	5.0	4.0	76.0	187	616	1578	330	110	63.0	19.0	11.0	7.0	250	264	161160
1954	5.0	4.0	26.0	152	405	278	89.0	76.0	89.0	74.0	30.0	17.0	104	110	76435
1955	11.0	8.0	24.0	301	692	387	289	67.0	44.0	26.0	14.0	9.0	157	166	113639
1956	6.0	5.0	67.0	118	215	105	156	41.0	29.0	18.0	11.0	7.0	65.2	69.0	47296
1957	5.0	4.0	45.0	151	264	186	57.0	25.0	20.0	16.0	10.0	6.0	66.0	70.0	47762
1958	4.0	4.0	43.0	282	336	231	260	92.0	44.0	17.0	10.0	7.0	111	118	80630
1959	4.0	4.0	91.0	142	288	230	91.0	36.0	37.0	28.0	15.0	9.0	81.5	85.0	59086
1960	6.0	5.0	116	90.0	259	129	39.0	21.0	6.0	8.0	6.0	4.0	57.7	61.0	41887
1961	3.0	3.0	22.0	42.0	149	67.0	16.0	23.0	11.0	81.0	32.0	18.0	39.2	41.0	28395
1962	11.0	8.0	97.0	259	120	88.0	26.0	11.0	11.0	12.0	8.0	5.0	54.6	58.0	39562
1963	4.0	4.0	17.0	28.0	61.0	411	369	44.0	24.0	8.0	6.0	4.0	81.9	87.0	59304
1964	3.0	3.0	8.0	72.0	410	257	74.0	25.0	32.0	20.0	12.0	7.0	77.1	81.0	56001
1965	5.0	4.0	18.0	191	117	296	211	65.0	85.0	65.0	27.0	15.0	92.0	97.0	66601
1966	10.0	7.0	68.0	87.0	164	362	103	63.0	24.0	16.0	10.0	6.0	76.6	81.0	55566
1967	4.0	4.0	80.0	100	695	829	211	51.0	15.0	13.0	9.0	6.0	166	178	122106
1968	4.0	4.0	36.0	37.0	76.0	149	65.0	43.0	92.0	49.0	22.0	13.0	45.1	52.0	36667
1969	8.0	6.0	81.0	390	358	549	561	74.0	40.0	19.0	11.0	7.0	176	186	127371
1970	5.0	4.0	45.0	104	264	334	98.0	27.0	18.0	14.0	9.0	6.0	77.5	82.0	56114
1971	4.0	4.0	59.0	169	139	214	40.0	12.0	11.0	13.0	9.0	6.0	56.6	60.0	40986
1972	4.0	4.0	129	250	501	247	94.0	84.0	76.0	28.0	15.0	9.0	120	127	87421
1973	6.0	5.0	56.0	145	346	226	61.0	29.0	24.0	16.0	10.0	6.0	77.6	82.0	56350
1974	4.0	4.0	74.0	171	642	360	80.0	54.0	44.0	28.0	15.0	9.0	124	131	90115
1975	6.0	5.0	42.0	221	524	479	207	76.0	39.0	20.0	12.0	7.0	137	145	96197
1976	5.0	4.0	77.0	116	155	93.0	26.0	163	45.0	25.0	14.0	8.0	61.2	65.0	44400
1977	5.0	5.0	26.0	66.0	37.0	19.0	5.0	17.0	17.0	18.0	11.0	7.0	19.4	21.0	14073
1978	5.0	4.0	89.0	111	325	304	153	61.0	52.0	26.0	14.0	9.0	96.6	102	69117
1979	6.0	5.0	62.0	173	396	150	40.0	34.0	15.0	10.0	7.0	5.0	75.7	80.0	54809
1980	3.0	3.0	20.0	111	131	189	20.0	25.0	34.0	34.0	17.0	10.0	49.6	52.0	36000
1981	7.0	5.0	33.0	33.0	657	416	138	67.0	23.0	23.0	13.0	8.0	119	126	86505
1982	5.0	5.0	15.0	106	54.0	189	63.0	14.0	20.0	20.0	12.0	7.0	42.4	45.0	30680
1983	5.0	4.0	40.0	63.0	92.0	70.0	33.0	6.0	0.0	11.0	8.0	5.0	28.2	30.0	20418
MIN	1.	1.	6.	28.	37.	19.	5.	2.	0.	1.	1.	1.	19.		14073.
MAX	26.	14.	145.	390.	1038.	1578.	573.	218.	408.	329.	89.	43.	255.		184306.
MEAN	6.	5.	48.	144.	292.	332.	134.	53.	53.	39.	17.	10.	95.	100.	68599.

A P P E N D I X E

Willow Creek Basin (G-Files)

Arrays of Natural Flows at Project Sites

SITE - 1 RESERVOIR
NATURAL FLOWS DERIVED FROM C FILE DATA - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	Σ	AC. FT.
1912	6.	9.	87	174.	257.	295.	337.	218.	95.	74.	39.	24.	135.	116	98071.
1913	7.	14.	30.	303.	329.	250.	210.	140.	55.	57.	33.	18.	122.	105	88211.
1914	7.	12.	29.	138.	138.	128.	68.	22.	17.	76.	40.	24.	58.	50	42268.
1915	7.	14.	40.	102.	770.	1077.	803.	430.	193.	108.	51.	46.	305.	263	220971.
1916	7.	30.	99.	165.	270.	857.	399.	130.	158.	138.	65.	48.	197.	170	142891.
1917	9.	15.	42.	294.	1031.	1230.	271.	119.	71.	52.	39.	13.	266.	229	192569.
1918	8.	16.	53.	80.	133.	100.	23.	16.	27.	27.	13.	5.	42.	36	30274.
1919	6.	6.	5.	89.	119.	45.	3.	7.	6.	15.	21.	8.	28.	24	19936.
1920	7.	8.	64.	218.	928.	420.	144.	32.	17.	20.	16.	7.	157.	136	114296.
1921	4.	10.	37.	131.	142.	96.	28.	8.	17.	11.	6.	42.	36	30073.	
1922	3.	1.	4.	168.	317.	139.	62.	16.	6.	11.	9.	2.	62.	53	44733.
1923	4.	1.	10.	76.	117.	1453.	444.	208.	77.	46.	28.	16.	206.	178	149242.
1924	7.	11.	46.	176.	251.	427.	144.	124.	35.	29.	20.	11.	107.	92	77417.
1925	6.	9.	62.	241.	192.	306.	55.	25.	35.	101.	49.	50.	94.	81	68237.
1926	8.	16.	26.	120.	78.	327.	222.	63.	345.	190.	75.	51.	127.	109	91708.
1927	10.	22.	68.	149.	872.	1093.	295.	248.	446.	289.	103.	76.	308.	265	222653.
1928	12.	27.	231.	312.	357.	660.	705.	251.	113.	78.	41.	25.	235.	203	170563.
1929	7.	14.	56.	185.	560.	845.	119.	41.	32.	34.	23.	12.	161.	138	116313.
1930	6.	67.	62.	216.	229.	199.	73.	17.	20.	24.	16.	9.	78.	67	56501.
1931	6.	8.	27.	59.	74.	67.	15.	8.	13.	11.	10.	5.	25.	22	18288.
1932	5.	6.	24.	84.	242.	933.	50.	27.	27.	25.	16.	9.	120.	103	87027.
1933	6.	8.	24.	221.	318.	255.	65.	26.	25.	16.	13.	7.	82.	71	59437.
1934	6.	7.	45.	146.	267.	116.	30.	7.	13.	17.	14.	7.	56.	49	40889.
1935	6.	7.	18.	244.	119.	103.	38.	8.	2.	11.	10.	4.	47.	41	34294.
1936	5.	6.	85.	205.	50.	45.	3.	1.	1.	1.	2.	1.	34.	29	24377.
1937	3.	2.	7.	69.	74.	247.	36.	15.	8.	23.	16.	8.	42.	37	30668.
1938	6.	8.	38.	170.	433.	207.	106.	23.	7.	15.	13.	6.	86.	75	62620.
1939	5.	7.	63.	63.	48.	415.	92.	14.	9.	28.	20.	11.	65.	56	46905.
1940	6.	9.	32.	120.	189.	84.	31.	11.	46.	47.	29.	16.	52.	45	37533.
1941	7.	11.	23.	44.	49.	95.	25.	11.	42.	45.	27.	14.	33.	28	23687.
1942	7.	11.	23.	119.	1065.	1083.	483.	253.	162.	109.	51.	33.	265.	245	206124.
1943	8.	17.	115.	354.	238.	208.	72.	17.	10.	17.	14.	7.	90.	78	55205.
1944	2.	2.	9.	80.	46.	52.	25.	9.	5.	9.	8.	3.	21.	18	15076.
1945	1.	1.	20.	37.	280.	513.	146.	27.	33.	42.	21.	29.	96.	83	69630.
1946	12.	14.	50.	71.	114.	343.	78.	27.	66.	53.	31.	20.	73.	63	52951.
1947	16.	42.	121.	305.	353.	325.	93.	71.	148.	113.	67.	50.	142.	122	102849.
1948	34.	27.	133.	468.	1252.	866.	296.	133.	57.	41.	26.	9.	276.	241	202574.
1949	5.	4.	19.	129.	130.	119.	36.	5.	5.	14.	18.	8.	41.	35	29691.
1950	2.	13.	40.	119.	187.	135.	36.	19.	5.	13.	8.	8.	49.	42	35363.
1951	6.	5.	264.	219.	552.	1089.	460.	214.	457.	306.	129.	78.	316.	272	228575.
1952	20.	55.	159.	476.	305.	319.	187.	123.	63.	40.	27.	16.	149.	128	108208.
1953	10.	18.	111.	230.	731.	2131.	389.	118.	67.	42.	36.	24.	325.	280	235238.
1954	21.	33.	27.	183.	474.	318.	85.	61.	94.	122.	68.	32.	129.	111	93057.
1955	13.	20.	24.	390.	825.	458.	388.	76.	46.	41.	18.	22.	194.	168	140785.
1956	18.	11.	94.	138.	245.	109.	195.	40.	30.	23.	24.	12.	75.	68	57158.
1957	5.	16.	55.	182.	304.	205.	44.	22.	20.	33.	29.	16.	78.	67	56285.
1958	10.	11.	52.	363.	391.	260.	347.	109.	46.	25.	23.	20.	139.	120	100447.
1959	13.	9.	140.	170.	334.	259.	77.	34.	38.	33.	37.	25.	98.	84	70887.
1960	19.	33.	194.	103.	299.	138.	27.	19.	6.	10.	9.	8.	72.	62	52548.
1961	8.	9.	21.	44.	169.	67.	15.	17.	11.	50.	30.	15.	38.	33	27683.
1962	29.	46.	154.	330.	135.	91.	26.	9.	11.	11.	10.	7.	71.	62	51667.
1963	6.	13.	15.	28.	67.	488.	494.	45.	24.	17.	12.	10.	102.	88	73781.
1964	5.	5.	5.	79.	480.	292.	85.	22.	33.	24.	17.	8.	88.	76	64015.
1965	5.	47.	16.	236.	131.	341.	260.	63.	94.	64.	32.	24.	105.	94	79059.
1966	11.	11.	95.	99.	186.	426.	99.	59.	24.	28.	23.	10.	85.	77	64653.
1967	5.	8.	120.	114.	827.	1054.	182.	51.	15.	15.	17.	7.	202.	174	146126.
1968	9.	9.	40.	38.	84.	162.	66.	47.	98.	140.	55.	33.	65.	56	47286.
1969	22.	19.	121.	520.	417.	671.	840.	90.	42.	35.	34.	14.	237.	204	171322.
1970	15.	26.	55.	120.	305.	390.	109.	22.	18.	27.	7.	10.	82.	80	66912.
1971	50.	102.	79.	205.	158.	239.	40.	5.	11.	21.	13.	2.	76.	66	55341.
1972	3.	10.	224.	317.	591.	280.	82.	125.	80.	56.	54.	26.	155.	134	112754.
1973	37.	44.	73.	173.	405.	254.	59.	29.	25.	23.	15.	16.	96.	83	69584.
1974	12.	17.	107.	209.	763.	423.	84.	60.	46.	39.	25.	22.	151.	131	109613.
1975	15.	24.	51.	277.	618.	578.	245.	89.	41.	36.	20.	17.	168.	145	121692.
1976	34.	13.	112.	136.	177.	97.	28.	257.	47.	29.	16.	19.	84.	73	61156.
1977	22.	8.	27.	72.	41.	17.	2.	16.	15.	17.	3.	5.	20.	18	14805.
1978	3.	0.	122.	125.	441.	355.	193.	76.	66.	25.	30.	16.	123.	105	88752.
1979	5.	16.	93.	223.	490.	179.	40.	37.	19.	16.	5.	8.	95.	82	58602.
1980	4.	11.	26.	133.	132.	194.	20.	24.	30.	30.	21.	23.	54.	46	39051.
1981	15.	21.	35.	35.	685.	501.	171.	84.	22.	22.	14.	1.	135.	116	97551.
1982	1.	1.	11.	111.	66.	201.	71.	10.	16.	18.	15.	11.	44.	38	32025.
1983	16.	16.	41.	68.	96.	69.	26.	1.	0.	7.	16.	11.	31.	26	22167.
MIN	1.	0.	4.	28.	41.	17.	2.	1.	0.	1.	2.	1.	20.		14805.
MAX	50.	102.	264.	520.	1252.	2131.	840.	430.	457.	306.	129.	78.	316.		228575.

SITE - 2 RESERVOIR
NATURAL FLOWS DERIVED FROM C FILE DATA - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	Σ	AC. FT.
1912	1.	1.	2.	6.	4.	4.	5.	2.	2.	1.	1.	1.	3.	125	1815.
1913	1.	1.	0.	7.	3.	5.	2.	1.	0.	1.	1.	1.	2.	95	1382
1914	0.	1.	0.	4.	1.	0.	0.	0.	0.	2.	2.	1.	1.	45	659
1915	1.	1.	1.	4.	9.	17.	16.	10.	5.	4.	3.	2.	6.	305	4425.
1916	1.	1.	13.	4.	5.	14.	7.	4.	4.	4.	2.	2.	5.	254	3699
1917	1.	1.	1.	4.	26.	37.	10.	5.	3.	2.	2.	1.	8.	387	5621.
1918	1.	1.	1.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	20	298
1919	0.	0.	1.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	12	180
1920	0.	0.	2.	5.	15.	5.	2.	1.	0.	0.	0.	0.	3.	125	1825.
1921	0.	0.	1.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	21	301.
1922	0.	0.	1.	4.	4.	1.	1.	0.	0.	0.	0.	0.	1.	46	666
1923	0.	0.	1.	3.	5.	67.	11.	3.	1.	1.	1.	1.	8.	388	5637.
1924	0.	1.	1.	4.	2.	5.	2.	2.	1.	1.	1.	1.	2.	87	1265.
1925	0.	1.	2.	5.	2.	4.	1.	1.	1.	2.	2.	1.	2.	91	1323.
1926	1.	1.	0.	2.	0.	4.	4.	1.	2.	3.	2.	1.	2.	87	1265.
1927	1.	1.	2.	3.	14.	18.	4.	3.	2.	4.	3.	2.	5.	237	3447.
1928	1.	1.	8.	7.	5.	8.	8.	3.	1.	1.	1.	1.	4.	191	2789.
1929	1.	1.	1.	4.	8.	13.	2.	1.	1.	1.	1.	1.	3.	145	2108.
1930	0.	1.	2.	5.	2.	2.	1.	0.	0.	0.	0.	0.	1.	54	780.
1931	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	4	60.
1932	0.	0.	0.	1.	2.	14.	1.	1.	0.	0.	0.	0.	2.	78	1139.
1933	0.	0.	0.	5.	4.	3.	1.	1.	0.	0.	0.	0.	1.	58	845.
1934	0.	0.	1.	3.	3.	1.	0.	0.	0.	0.	0.	0.	1.	33	484.
1935	0.	0.	0.	5.	1.	1.	1.	0.	0.	0.	0.	0.	1.	33	480.
1936	0.	0.	2.	5.	0.	0.	0.	0.	0.	0.	0.	0.	1.	29	420.
1937	0.	0.	0.	1.	0.	3.	0.	0.	0.	0.	0.	0.	0.	16	238
1938	0.	0.	1.	4.	5.	2.	2.	0.	0.	0.	0.	0.	1.	58	845.
1939	0.	0.	2.	1.	0.	5.	1.	0.	0.	1.	1.	1.	1.	50	724.
1940	0.	1.	1.	2.	2.	0.	0.	0.	1.	1.	1.	1.	1.	41	603.
1941	0.	1.	0.	0.	0.	1.	0.	0.	1.	1.	1.	1.	0.	25	357.
1942	0.	1.	0.	2.	18.	17.	6.	3.	1.	2.	2.	1.	4.	221	3205.
1943	1.	1.	4.	8.	2.	2.	1.	0.	0.	0.	0.	0.	2.	75	1142.
1944	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	4	60.
1945	0.	0.	0.	0.	2.	6.	2.	0.	0.	0.	0.	0.	1.	42	603.
1946	0.	0.	1.	1.	1.	4.	1.	0.	1.	1.	1.	1.	1.	50	724.
1947	1.	1.	4.	6.	5.	4.	1.	1.	1.	2.	2.	1.	2.	121	1751.
1948	1.	1.	5.	12.	27.	16.	5.	2.	1.	1.	1.	1.	6.	304	4425.
1949	0.	1.	0.	4.	1.	1.	0.	0.	0.	0.	0.	0.	1.	29	415.
1950	0.	0.	1.	2.	2.	1.	1.	0.	0.	0.	0.	0.	1.	29	424.
1951	0.	0.	9.	5.	7.	16.	6.	3.	2.	4.	2.	2.	5.	234	3394.
1952	1.	1.	5.	12.	4.	4.	3.	2.	1.	1.	1.	1.	3.	149	2174.
1953	0.	1.	4.	4.	12.	37.	5.	2.	1.	1.	1.	1.	6.	286	4151.
1954	0.	1.	0.	5.	5.	5.	1.	1.	1.	2.	2.	1.	2.	95	1444.
1955	1.	1.	0.	8.	15.	7.	5.	1.	1.	1.	1.	1.	4.	175	2543.
1956	0.	1.	3.	2.	2.	1.	3.	1.	1.	0.	0.	0.	1.	58	849.
1957	0.	0.	1.	4.	4.	2.	1.	0.	0.	1.	1.	1.	1.	63	908.
1958	0.	1.	1.	9.	5.	2.	5.	2.	1.	1.	1.	1.	2.	121	1751.
1959	0.	1.	5.	3.	5.	4.	1.	1.	1.	1.	1.	1.	2.	100	1452.
1960	0.	1.	7.	2.	4.	2.	0.	0.	0.	0.	0.	0.	1.	67	972.
1961	0.	0.	0.	0.	1.	0.	0.	0.	0.	1.	1.	1.	0.	17	244.
1962	0.	1.	5.	7.	1.	1.	0.	0.	0.	0.	0.	0.	1.	62	900.
1963	0.	0.	0.	0.	0.	5.	6.	1.	0.	0.	0.	0.	1.	50	728.
1964	0.	0.	0.	1.	6.	3.	1.	0.	0.	0.	0.	0.	1.	46	668.
1965	0.	0.	0.	5.	1.	4.	4.	1.	1.	1.	1.	1.	2.	79	1146.
1966	1.	1.	3.	1.	1.	5.	2.	1.	0.	0.	0.	0.	1.	62	904.
1967	0.	0.	5.	4.	37.	30.	4.	2.	1.	1.	1.	1.	7.	359	5217.
1968	1.	1.	1.	2.	1.	2.	0.	0.	0.	0.	0.	0.	1.	33	480.
1969	0.	1.	16.	14.	6.	7.	8.	2.	1.	1.	1.	1.	5.	242	3515.
1970	1.	1.	1.	2.	2.	1.	0.	0.	0.	0.	0.	0.	1.	33	480.
1971	0.	0.	1.	4.	1.	2.	0.	0.	0.	0.	0.	0.	1.	33	480.
1972	0.	0.	10.	8.	10.	6.	2.	1.	0.	1.	1.	1.	3.	167	2430.
1973	1.	1.	1.	1.	2.	2.	0.	0.	0.	0.	0.	0.	1.	33	480.
1974	0.	0.	2.	4.	5.	5.	1.	2.	0.	0.	0.	0.	2.	79	1150.
1975	0.	0.	0.	6.	9.	10.	6.	2.	1.	1.	1.	1.	3.	154	2239.
1976	0.	1.	4.	2.	1.	1.	0.	3.	1.	0.	0.	0.	1.	54	787.
1977	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	4	60.
1978	0.	0.	30.	4.	4.	3.	2.	0.	2.	0.	0.	0.	4.	189	2749.
1979	0.	0.	3.	4.	5.	1.	0.	0.	0.	0.	0.	0.	1.	54	789.
1980	0.	0.	2.	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.	17	244.
1981	0.	0.	0.	0.	8.	3.	1.	0.	0.	0.	0.	0.	1.	50	732.
1982	0.	0.	0.	1.	0.	2.	0.	0.	0.	0.	0.	0.	0.	12	179.
1983	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0	0.
MIN	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.		0.
MAX	1.	1.	30.	14.	37.	67.	18.	10.	8.	4.	3.	2.	8.		5637.
MEAN	0.	1.	3.	4.	8.	8.	2.	1.	1.	1.	1.	1.	2.	100	1454.

SITE - 2A DIVERSION
NATURAL FLOWS DERIVED FROM C FILE DATA - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	Σ	AC. FT.
1912	5.	7.	77.	161.	243.	279.	308.	182.	93.	62.	32.	19.	123.	115	89115
1913	7.	11.	29.	276.	310.	238.	197.	123.	84.	54.	28.	16.	113.	106	81925.
1914	7.	10.	29.	129.	132.	125.	68.	23.	17.	61.	31.	19.	54.	51	39370.
1915	7.	11.	39.	97.	718.	977.	704.	339.	186.	90.	41.	33.	272.	254	186697.
1916	8.	20.	86.	154.	255.	784.	362.	114.	153.	122.	53.	36.	179.	167	129665.
1917	11.	13.	40.	268.	957.	1112.	251.	105.	69.	38.	27.	11.	242.	227	175432.
1918	7.	11.	49.	77.	127.	98.	25.	18.	27.	27.	14.	6.	41.	38	29389.
1919	6.	6.	6.	85.	113.	46.	4.	8.	6.	15.	16.	7.	27.	25	19214.
1920	6.	7.	59.	201.	863.	393.	138.	33.	17.	17.	13.	7.	147.	137	106584.
1921	4.	8.	35.	123.	135.	94.	30.	9.	8.	16.	10.	6.	40.	37	28877.
1922	3.	2.	5.	156.	299.	135.	62.	18.	6.	10.	8.	3.	59.	55	42855.
1923	4.	2.	11.	73.	111.	1306.	401.	175.	76.	35.	21.	13.	185.	173	134055.
1924	6.	8.	43.	163.	237.	399.	139.	110.	35.	27.	17.	10.	99.	93	72167.
1925	6.	7.	56.	221.	182.	289.	56.	27.	35.	89.	41.	36.	87.	81	63051.
1926	9.	13.	26.	113.	75.	309.	208.	60.	330.	185.	67.	42.	120.	112	86556.
1927	13.	17.	62.	140.	811.	951.	272.	205.	425.	312.	97.	62.	285.	266	206108.
1928	18.	22.	188.	283.	336.	609.	621.	207.	110.	63.	32.	19.	209.	196	152073.
1929	7.	11.	51.	172.	524.	773.	115.	41.	32.	26.	17.	10.	148.	135	107349.
1930	5.	40.	56.	199.	216.	191.	73.	19.	20.	20.	14.	8.	72.	67	51862.
1931	5.	6.	27.	58.	71.	67.	17.	9.	13.	10.	8.	5.	25.	23	17875.
1932	4.	5.	24.	81.	229.	850.	51.	29.	27.	22.	15.	8.	111.	104	80751.
1933	6.	6.	24.	204.	300.	243.	65.	28.	25.	14.	11.	6.	78.	73	56313.
1934	5.	5.	43.	136.	252.	114.	32.	8.	13.	15.	12.	6.	54.	50	38838.
1935	5.	6.	18.	224.	114.	102.	39.	9.	2.	13.	10.	5.	45.	43	32928.
1936	5.	5.	76.	189.	49.	46.	4.	1.	1.	1.	2.	1.	32.	29	22873.
1937	2.	2.	8.	67.	71.	235.	37.	17.	8.	24.	16.	8.	41.	35	29778.
1938	6.	7.	37.	158.	406.	198.	104.	24.	7.	15.	11.	6.	82.	77	59413.
1939	5.	6.	58.	62.	47.	382.	90.	16.	9.	28.	18.	10.	62.	58	44573.
1940	6.	7.	31.	113.	179.	83.	33.	12.	45.	55.	29.	16.	51.	48	36883.
1941	8.	9.	23.	45.	48.	94.	27.	12.	41.	57.	28.	15.	34.	32	24440.
1942	8.	10.	23.	113.	988.	983.	434.	208.	156.	92.	41.	26.	256.	242	186681.
1943	9.	13.	102.	321.	224.	199.	72.	19.	10.	16.	12.	7.	84.	76	60581.
1944	3.	3.	10.	77.	44.	52.	24.	11.	5.	9.	8.	4.	21.	19	15078.
1945	2.	2.	20.	37.	264.	477.	136.	26.	33.	43.	21.	22.	90.	85	65453.
1946	11.	11.	47.	69.	108.	323.	73.	26.	64.	52.	27.	17.	69.	64	49886.
1947	13.	20.	104.	277.	332.	307.	92.	62.	143.	99.	52.	36.	129.	120	93176.
1948	24.	19.	113.	419.	1160.	791.	287.	127.	56.	31.	20.	8.	255.	239	185218.
1949	5.	4.	19.	121.	124.	117.	37.	7.	5.	15.	15.	7.	40.	37	26733.
1950	3.	9.	39.	113.	178.	132.	40.	20.	5.	13.	8.	7.	47.	44	34298.
1951	5.	5.	213.	202.	516.	988.	418.	181.	436.	303.	109.	62.	287.	269	207923.
1952	21.	37.	134.	428.	288.	302.	177.	109.	62.	31.	21.	12.	135.	126	97974.
1953	8.	12.	96.	212.	681.	1893.	384.	115.	65.	32.	25.	17.	253.	274	212011.
1954	14.	20.	27.	169.	444.	301.	86.	79.	92.	101.	51.	26.	118.	110	85363.
1955	12.	15.	24.	252.	768.	427.	345.	72.	45.	35.	16.	16.	178.	167	129029.
1956	13.	9.	22.	129.	233.	108.	178.	40.	30.	1.	18.	10.	73.	68	52955.
1957	5.	11.	51.	168.	287.	197.	49.	23.	20.	26.	21.	12.	73.	68	52623.
1958	8.	8.	48.	328.	367.	247.	310.	102.	45.	22.	17.	15.	127.	119	91966.
1959	9.	7.	119.	158.	314.	246.	83.	35.	38.	31.	27.	19.	91.	85	65804.
1960	14.	21.	161.	97.	282.	134.	32.	20.	6.	9.	8.	6.	56.	62	48006.
1961	6.	7.	21.	43.	160.	67.	15.	19.	11.	63.	31.	16.	39.	36	27880.
1962	21.	29.	129.	299.	129.	90.	26.	10.	11.	11.	9.	6.	64.	60	46362.
1963	5.	5.	16.	28.	65.	455.	440.	45.	24.	13.	10.	8.	93.	87	67664.
1964	4.	4.	6.	76.	450.	277.	80.	23.	33.	22.	15.	8.	63.	78	66553.
1965	5.	29.	17.	217.	125.	322.	239.	64.	92.	64.	30.	20.	102.	95	73777.
1966	11.	10.	83.	94.	177.	398.	101.	60.	24.	23.	17.	5.	84.	79	60801.
1967	5.	7.	103.	108.	770.	957.	195.	51.	15.	15.	14.	7.	182.	176	135951.
1968	7.	7.	39.	38.	81.	156.	66.	46.	56.	101.	41.	24.	59.	55	42480.
1969	16.	13.	104.	464.	392.	619.	720.	83.	41.	30.	24.	11.	211.	197	152410.
1970	13.	16.	51.	113.	288.	366.	104.	24.	18.	22.	8.	8.	86.	81	62297.
1971	30.	60.	70.	189.	150.	228.	40.	8.	11.	18.	12.	4.	68.	64	49180.
1972	3.	8.	183.	288.	552.	266.	87.	108.	79.	49.	37.	19.	140.	131	101877.
1973	24.	27.	66.	161.	378.	242.	60.	29.	25.	20.	13.	12.	88.	83	63957.
1974	9.	12.	93.	192.	711.	396.	82.	58.	45.	34.	21.	16.	140.	131	101254.
1975	11.	16.	47.	253.	578.	535.	228.	83.	40.	29.	17.	13.	155.	145	111581.
1976	21.	9.	97.	127.	167.	95.	27.	239.	46.	28.	15.	14.	74.	65	53819.
1977	15.	7.	27.	70.	39.	18.	3.	16.	16.	17.	6.	6.	20.	19	14457.
1978	4.	2.	108.	119.	391.	333.	176.	70.	60.	31.	23.	13.	111.	104	80705.
1979	5.	11.	80.	202.	450.	166.	40.	36.	18.	14.	6.	7.	87.	81	62797.
1980	4.	8.	24.	123.	132.	192.	20.	24.	32.	32.	19.	18.	52.	49	37857.
1981	12.	14.	34.	34.	673.	465.	157.	77.	22.	22.	14.	4.	128.	120	92809.
1982	2.	2.	13.	109.	61.	196.	68.	12.	18.	19.	14.	10.	44.	41	31539.
1983	11.	11.	41.	66.	95.	69.	29.	3.	0.	9.	13.	9.	30.	28	21531.

MIN	2.	2.	5.	28.	39.	18.	3.	1.	0.	1.	2.	1.	20.		14497.
MAX	30.	50.	213.	464.	1160.	1893.	720.	339.	436.	312.	109.	62.	293.		212011.

SITE - 3 RESERVOIR
NATURAL FLOWS DERIVED FROM C FILE DATA - CFS

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	MEAN	%	AC. FT.
1912	3.	3.	60.	137.	213.	247.	257.	130.	84.	45.	21.	13.	101.	113	73603.
1913	8.	6.	26.	226.	272.	213.	169.	97.	58.	47.	21.	13.	97.	107	70017.
1914	8.	6.	26.	111.	118.	116.	84.	24.	16.	41.	19.	12.	47.	52	33939.
1915	7.	6.	33.	84.	619.	804.	540.	211.	165.	63.	26.	15.	216.	240	156032.
1916	10.	7.	65.	131.	223.	859.	298.	100.	141.	100.	37.	21.	149.	166	108238.
1917	13.	9.	34.	218.	814.	912.	210.	82.	63.	19.	12.	7.	200.	222	144696.
1918	5.	4.	41.	68.	114.	91.	25.	21.	24.	27.	14.	9.	37.	41	26824.
1919	6.	5.	7.	75.	103.	44.	5.	11.	6.	13.	9.	6.	24.	27	17536.
1920	4.	4.	47.	168.	737.	340.	126.	33.	16.	12.	9.	6.	126.	140	91281.
1921	4.	4.	31.	106.	121.	88.	31.	11.	8.	14.	9.	6.	36.	40	26182.
1922	4.	4.	6.	132.	261.	124.	59.	20.	6.	8.	7.	4.	53.	59	38487.
1923	3.	3.	12.	65.	100.	1059.	321.	123.	69.	20.	12.	8.	145.	166	107962.
1924	5.	4.	36.	138.	208.	345.	123.	90.	32.	22.	12.	8.	85.	95	61841.
1925	5.	5.	46.	185.	163.	255.	54.	28.	32.	71.	29.	17.	74.	82	53700.
1926	10.	8.	23.	99.	67.	269.	176.	52.	290.	176.	56.	29.	105.	116	75703.
1927	18.	11.	49.	120.	693.	814.	228.	152.	371.	328.	89.	43.	244.	271	176467.
1928	26.	14.	124.	231.	295.	514.	479.	139.	99.	42.	20.	12.	167.	185	120899.
1929	8.	6.	42.	145.	453.	646.	103.	38.	29.	15.	10.	8.	125.	139	90611.
1930	4.	4.	45.	168.	192.	173.	68.	21.	19.	14.	9.	6.	60.	67	43700.
1931	4.	4.	24.	52.	64.	64.	18.	11.	12.	7.	5.	4.	22.	25	16253.
1932	3.	3.	22.	71.	202.	707.	49.	29.	25.	17.	11.	7.	95.	105	68838.
1933	5.	4.	22.	171.	263.	216.	62.	28.	23.	10.	8.	5.	68.	76	49382.
1934	3.	3.	36.	117.	222.	106.	32.	10.	12.	11.	8.	5.	47.	53	34241.
1935	4.	4.	18.	184.	101.	95.	39.	12.	2.	14.	9.	6.	41.	45	29407.
1936	4.	4.	58.	158.	44.	45.	5.	2.	1.	1.	1.	1.	27.	30	19500.
1937	1.	1.	5.	60.	64.	209.	37.	19.	8.	24.	13.	8.	38.	42	27273.
1938	5.	5.	31.	133.	357.	179.	95.	25.	7.	13.	9.	6.	73.	81	52506.
1939	4.	4.	46.	55.	43.	339.	83.	18.	8.	26.	14.	9.	54.	60	39057.
1940	6.	5.	28.	96.	159.	78.	33.	14.	41.	63.	27.	15.	47.	53	34360.
1941	10.	7.	21.	35.	43.	88.	27.	14.	38.	70.	29.	16.	34.	37	24292.
1942	10.	8.	21.	98.	837.	815.	350.	147.	144.	66.	27.	16.	213.	236	153919.
1943	10.	7.	74.	261.	198.	179.	67.	21.	9.	12.	5.	6.	71.	79	51499.
1944	4.	4.	11.	67.	41.	50.	21.	14.	5.	9.	7.	5.	20.	22	14362.
1945	3.	2.	19.	34.	233.	409.	113.	23.	30.	44.	20.	12.	75.	87	56987.
1946	6.	6.	39.	61.	97.	285.	64.	23.	58.	47.	21.	13.	60.	67	43515.
1947	8.	6.	76.	227.	290.	272.	84.	46.	129.	80.	32.	18.	106.	118	76621.
1948	11.	8.	80.	333.	984.	659.	257.	112.	50.	17.	11.	7.	211.	235	153382.
1949	5.	4.	15.	105.	112.	108.	37.	9.	5.	15.	10.	6.	36.	40	26271.
1950	4.	4.	33.	98.	158.	121.	42.	20.	5.	13.	5.	6.	43.	48	31057.
1951	4.	4.	134.	168.	446.	814.	344.	136.	389.	296.	83.	41.	239.	265	172885.
1952	24.	13.	93.	339.	251.	267.	154.	86.	56.	19.	12.	7.	110.	122	79837.
1953	5.	4.	70.	176.	584.	1503.	310.	103.	58.	18.	11.	7.	237.	264	171667.
1954	5.	4.	24.	143.	386.	265.	84.	73.	84.	72.	29.	17.	95.	110	71867.
1955	11.	8.	22.	282.	656.	368.	272.	63.	41.	25.	14.	9.	148.	165	107449.
1956	6.	5.	62.	110.	206.	100.	147.	39.	28.	17.	16.	7.	62.	69	44805.
1957	5.	4.	42.	143.	252.	178.	53.	23.	19.	15.	10.	6.	63.	70	45398.
1958	4.	4.	40.	264.	320.	220.	247.	86.	41.	16.	10.	7.	105.	117	76328.
1959	4.	4.	85.	133.	274.	221.	85.	34.	34.	27.	14.	9.	77.	86	55993.
1960	6.	5.	108.	84.	247.	123.	36.	20.	6.	8.	6.	4.	55.	61	29697.
1961	3.	3.	21.	40.	143.	63.	15.	22.	10.	77.	31.	17.	37.	42	27059.
1962	11.	8.	90.	242.	115.	84.	24.	10.	10.	11.	8.	5.	51.	57	37269.
1963	4.	4.	16.	26.	59.	390.	348.	41.	22.	8.	6.	4.	78.	86	56156.
1964	3.	3.	7.	68.	392.	244.	70.	23.	30.	19.	11.	7.	73.	81	53213.
1965	5.	4.	17.	180.	112.	283.	198.	61.	84.	62.	26.	14.	87.	97	63156.
1966	9.	7.	63.	82.	156.	342.	98.	60.	23.	15.	10.	6.	73.	81	52608.
1967	4.	4.	74.	94.	660.	789.	195.	47.	14.	12.	9.	6.	160.	177	115498.
1968	4.	4.	34.	35.	73.	143.	62.	41.	88.	49.	22.	13.	47.	53	34338.
1969	8.	6.	75.	366.	340.	527.	533.	69.	37.	18.	11.	7.	167.	186	120889.
1970	5.	4.	42.	97.	252.	321.	93.	25.	17.	13.	9.	6.	74.	82	53451.
1971	4.	4.	54.	158.	135.	205.	38.	11.	10.	12.	9.	6.	54.	60	32940.
1972	4.	4.	120.	235.	475.	234.	89.	81.	73.	28.	15.	9.	114.	127	82933.
1973	6.	5.	53.	137.	329.	214.	57.	27.	23.	15.	9.	6.	74.	82	53381.
1974	4.	4.	68.	162.	608.	342.	75.	51.	42.	27.	14.	9.	118.	131	85317.
1975	6.	5.	39.	205.	499.	456.	196.	72.	37.	19.	11.	7.	130.	144	93993.
1976	5.	4.	71.	109.	148.	89.	25.	162.	43.	24.	13.	8.	59.	65	42583.
1977	5.	5.	24.	62.	35.	18.	5.	16.	16.	17.	10.	7.	18.	20	13287.
1978	5.	4.	82.	105.	310.	288.	146.	58.	49.	25.	14.	9.	92.	102	66401.
1979	6.	5.	58.	162.	375.	141.	38.	32.	14.	9.	7.	5.	71.	79	51715.
1980	3.	3.	19.	105.	125.	181.	19.	24.	33.	32.	17.	10.	47.	53	34431.
1981	7.	5.	31.	32.	628.	394.	130.	83.	22.	22.	12.	7.	114.	126	82251.
1982	5.	5.	14.	99.	52.	181.	59.	13.	19.	19.	11.	7.	40.	45	29115.
1983	5.	4.	37.	61.	89.	68.	31.	6.	0.	10.	8.	5.	27.	30	19626.
MIN	1.	1.	8.	26.	25.	18.	8.	2.	0.	1.	1.	1.	18.		13287.
MAX	26.	14.	134.	366.	984.	1503.	940.	211.	389.	328.	89.	43.	244.		176467.
MEAN	8.	8.	46.	135.	278.	317.	127.	81.	60.	37.	17.	10.	90.	100	65194.

N.L.C. - B.N.C.



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